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THE address of President COXE at the Montreal Meeting of the Institute will be published next week.

WE shall publish next week a full report of the lecture delivered by Dr. RAYMOND on the 2d inst., at the Bullion Club, concerning "The Valuation of Mines."

Mr. J. C. F. RANDOLPH, mining engineer, has returned to the city from his recent trip to Mexico, where he examined a number of rich mines in the State of Chihuahua.

THERE is a great excitement about the rich strikes in the Majada mines in Mexico, and our miners are going South in great numbers. In a little while, if the mines don't give out, the frontier will itself move South, and leave the mines to Uncle Sam.

THE demand for good iron ores increases, and there will probably be a short supply of Bessemer ores under the extraordinary demand for steel rails, etc. In another column will be found a card offering an interest in a valuable iron ore property, near New York waters, which is worthy the attention of furnace owners.

THE Bodie *News* still continues to work its vein of billingsgate, which appears much more nearly inexhaustible than the ore in its pet Bodie bubbles. There are, however, signs that the vein is petering; and perhaps, when it has quite given out, the *News* may find time and space to tell the public about that fictitious "four feet of gold-bearing quartz of fine quality" which it editorially stated to exist in the Maryland Consolidated "mine," and which erroneous statement, it knows, was used here to float the stock at three dollars a share.

WE have had a number of inquiries concerning the Rocker Silver Mining Company, of Montana, the stock of which has been offered and, we believe, sold in considerable quantity here in the East. We are informed, from entirely reliable sources, that "the mines have, in the past, produced nothing of value, and are quite unlikely to do much better in the future. The company has 24 men employed, most of them in making roads. The Rocker mine produces occasionally a specimen of ore which, it is claimed, carries 80 ounces, but nothing approaching 'pay' has yet been discovered. There is no ore in sight; but the superintendent intends continuing prospecting for a year, whether he strikes any thing or not." The property seems to be the merest prospect, and far from a favorable prospect, at that—the glowing prospectus issued by the company some months ago to the contrary notwithstanding.

THE boom in the metal markets continues undiminished; indeed, it seems to grow in intensity from day to day. Thus, lead, which, a short time ago, was selling at 3 cents, rose rapidly to 3½, 4, 4½, 5, and is now held at 5½ cents per lb. That this sudden rise is not altogether without reason, may be seen by reference to the following statistical statement:

	May 1. Tons.	Oct. 1. Tons.
The stock in New York stores and at Newark works	12,550	6,970
Lead and bullion in transit from California (by water)	2,200	150
In transit by rail from Utah and Nevada	2,030	2,100
From Colorado	700	1,250
	16,480	10,470
Reduction in stock		7,010

Early in the year, the Eureka Company shipped about 1500 tons monthly—now, about half that amount. The arrivals of lead and bullion at New York since May 1st have been about 11,000 tons, and our surplus has been reduced 7000 tons, making a total consumption, supplied *from this point alone*, of 18,000 tons in five months, at the rate of nearly 41,000 tons per annum; an increase of fifteen to twenty per cent over last year.

FRANCIS LAURENS VINTON.

The death of this distinguished soldier and engineer, which occurred on the 6th inst., at Leadville, Colo., will cause, in the wide circle of his friends and acquaintances, a shock of surprise and sorrow. General VINTON came of a military family. His father was an officer, distinguished in the Florida and Mexican wars, and killed in battle at the siege of Vera Cruz. His uncle, the late Rev. Dr. FRANCIS VINTON, of Trinity Church, was a graduate of West Point, and an officer in the army before he became a clergyman; and still another uncle had a similar history.

FRANCIS L. VINTON was appointed by President FILLMORE to a cadetship in the United States Military Academy, which he entered in 1851, and from which he graduated with honor in 1856, at the age of 24. He subsequently resigned his commission in order to study for several years in the *Ecole des Mines*, of Paris. On his return to the United States, in 1860, he at first gave instruction in the schools of the Cooper Union, but soon afterward was sent to Honduras as engineer in charge of the exploration of the mineral resources of that portion of Central America We quote from the New York *Herald* the following account of his military career:

"At the commencement of the rebellion, General Vinton hastened homeward after receiving the news of the first hostilities, and offered his services to his country. On the recommendation of General Scott, he was immediately commissioned as captain in the Sixteenth infantry, United States Army, the commission dating from August 5th, 1861, and permission was granted him to raise a regiment of volunteers. The Governor of Ohio offered him the command of a regiment, formed and equipped, and ready for the field. The Governor of Rhode Island proffered him a command in the forces of that gallant State. Several generals applied for him on their staffs. But General Vinton had already accepted the proposition of the Governor of New York to form and train in the art of war a regiment of New York volunteers. The Forty-third regiment was the first organized of the new levy, and was composed of the Albany boys and the canal drivers—men rough, but hardy, and inured to work in all weather. It was locally known as the Albany and Yates Rifles. Colonel Vinton had the merit of succeeding in drilling and disciplining these men to a state of military efficiency unsurpassed. In Hancock's brigade they acquired the name of 'the fighting regiment' and were noted for their accurate drill and splendid charges with the bayonet. The engagement at Williamsburg attested the consummate bravery and skill with which the Forty-third, with the other regiments of Hancock's brigade, made what General McClellan styled their 'superb charge' on the enemy, which turned the tide of battle and put the rebels to flight. General Vinton, with his regiment, was engaged in the siege of Yorktown, the battle of Williamsburg, at Gaines's Mill, at Savage Station, at Glendale, and at Harrison's Landing, 1862. He received a commission as brigadier-general, March 13th, 1863, and was given command of a brigade in the Sixth Army Corps. He took part in the Maryland and Rappahannock campaigns. At the battle of Fredericksburg, December 13th, 1862, he was severely wounded, and being henceforth unable to do active service in the field, he resigned his commission a few months later."

It was not until the organization of the Columbia College School of Mines in 1864, that General VINTON fairly became known as a mining engineer. In that institution, he occupied for a dozen years the professorship of mining. It was unfortunate for him that he was called to such a position so early in his professional career. To be severed from active practice and confined in the professor's chair; to lose some of the most important practical lessons of professional life, and to be obliged to teach when one would fain continue to learn only, is an experience both disagreeable and perilous to the young engineer. We have heard Prof. VINTON express bitterly, long before he left the chair of mining at Columbia, his dissatisfaction with the confinement of such a position, and the manner in which he was able to fulfill its requirements. Highly accomplished in mathematics, drawing, music, and many other branches, he seemed to take refuge in these things, and to lose professional ambition while discharging the routine duties of his office. His retirement from it, two or three years ago, and his entrance into active life in Colorado, constituted a change upon which his friends could well congratulate him, and, we believe, he was inclined to congratulate himself—at least, when its opportunities had fairly opened before him, andhe had begun to taste the well-earned fruits of success. He entered with a keen delight into the field-work as well as the theoretical inquiries presented by his new sphere of activity. As staff correspondent of the ENGINEERING AND MINING JOURNAL in Colorado, he soon

proved himself to be a quick and cool observer, a good judge of mining enterprises, and an admirable reporter of their salient features. His contributions, professional reports, and even his private letters, were illustrated with capital sketches in pencil, ink, or water-color. Many of these have been engraved for our columns; but his masterly handling of pen, pencil, and brush can not be fairly judged from such reproductions, printed upon an ordinary newspaper press. Occasionally, in supplements, we have succeeded better in doing him justice.

The general recognition of his literary, artistic, and professional ability must have been gratifying to him, even apart from the fact that it led to his profitable employment as expert in mining matters. Having been associated with him in several instances, we can bear witness to his acute perception and his fidelity in professional work. If he had enjoyed, at the beginning of his career, the opportunities and the discipline which were thus opened to him at last, he would have risen, we think, to high distinction in this special line of engineering, besides making, as the result of the application of his brilliant talents and scientific training to the problems of American practice, many valuable contributions to technical literature. But he was still young—younger in spirit and appearance than in years; and the most fruitful part of his life was apparently yet before him, when it was cut short by death.

It is true that he left a record of distinction above the average. It is only when we measure his career by the abilities which he displayed, rather than fully exercised, that it is impossible not to feel how much more he might have accomplished, and how great is the loss of his probable future achievements. The versatile, fascinating, apparently indolent, secretly-discontented Professor could have been better spared than the eager, hopeful, observant engineer who sprang into active life when the hampering robes of dignity had been cast aside. In either place, he made and kept friends; and while we attempt to speak over his grave the words of a discriminating judgment, we carry in heart, not to be spoken in words, the sense of a sincere personal sorrow. *

REMINISCENCES OF THE MONTREAL MEETING.

President Coxe, in the address which we print this week, struck the key-note of the Montreal meeting when he pointed out that the word "American," in the title of the Institute of Mining Engineers, does not bear the restricted sense often ascribed to it by residents of the United States. To science at least, if not to politics or patriotism, the boundary between this country and Canada is but an imaginary line. Now that the Dominion has a tariff of its own, and things are just as dear in Montreal as they are anywhere, there is not even the necessity of "shopping" to make one feel the difference. That used to be a duty, especially for the ladies; but the new duties have superseded the old one; and there is nothing to do in Montreal but to enjoy one's self.

It was remarked that the President seemed unusually depressed and solemn on the occasion referred to. We feel bound to explain that this was not due to the foreign atmosphere, but, on the contrary, to an institution from which Canada is free—to wit, Dodd's Express. That flourishing concern had taken in charge, for transportation across the city of New York, the official robes and papers of the President and Secretary, as well as the baggage of several other members. Four hours and a half was innocently deemed by these rural travelers a sufficient time for the metropolitan transfer of a trunk, conveyed by Dodd. It need scarcely be said that the New York members betrayed no such ignorance. Of course, the articles thus intrusted to Providence did not reach the station in time for the stipulated train. Nor were they sent by the next train, nor did they arrive at all until after much frantic telegraphing, and almost too late to be of service. Of course, the President, who had been obliged to buy a new suit of clothes in order to hold up his head before the gorgeousness of the Mayor of Montreal, was solemnized by the circumstances. There was some ghastly fun evoked by the experiences of so many of the members. If any thing was missing, the anxious owner, inquiring where it might be found, was likely to receive the reply, "Dodd only knows;" and on one occasion a speaker who rhetorically declared that he did not know how to express his feelings was advised by a voice in the audience to hand them over to Dodd and let him express them. The advice was, of course, ironical. Dodd will get neither feelings nor baggage from the Institute until after repentance and reform. [We respectfully invite Dodd to get angry at this gratuitous notice of his company, and challenge a controversy. It would be a great satisfaction to a good many people to have a chance to tell their tragic stories!]

Aside from the miseries caused by the doddling of baggage *en route*, we are free to say that the trip to Montreal was, to a large portion of the Institute pilgrims, truly delightful; and the stately corridors of the Windsor Hotel witnessed, as Head-quarters always do on such occasions, a series of rapturous reunions and mutual welcomes. Each new arrival increased in geometrical ratio the sum total of general joy, according to the well-known formula for permutations,

$$S = 1 \cdot 2 \cdot 3 \cdot 4 \ldots (n-2)(n-1)n,$$

which some fellow of infinite leisure will please to work out, assuming n to be, say, seventy-five or a hundred. He will find, if he lives, that the final product is rather more than the average mind can comprehend—which proves the fitness of the formula to the case in hand!

It is much to the credit of the Institute that the ladies find its meetings so enjoyable. Not that they devote to the professional proceedings that absolute attention which we trust they will one day manifest. At Montreal, they honored such favorites as Holley and Silliman with their presence; but when the clock said it was time to go and see the Gray Nuns, mere science could not keep them back. Or was it that the announcement of a paper on "Dressing" caused the dear creatures to withdraw in modest confusion? At all events, they were welcome while they stayed, and it was darker when they had departed, though the papers managed to get read and debated, in a gloomy and resolute style, despite their absence. But, work being over, the ladies daily took command; and no one could deny their fitness for the place. To them we owe, no doubt, the manifest cordiality of the good people of Montreal, who had prepared in faith, but in much ignorance, a hospitable reception for a body of which they knew next to nothing. Hunt, Torrance, Selwyn, Leckie, Macfarlane, and other Northern members may have explained, indeed, to courteous but incredulous listeners what an extremely agreeable lot of people was coming. But instantaneous conviction could be wrought only by the actual arrival of the fair Assistant Members themselves. Did we intimate that they should have attended the sessions more closely? We retract the suggestion. They were better employed. While we attacked, not too victoriously, the problems of technical practice, our sisters and cousins and wives conquered Montreal.

And Montreal took noble revenge, by capturing both them and us. The beauty of the city was not more notable than the courtesy of the citizens. Not long before, they had received with enthusiasm a regiment of our soldiers. Now the representatives of industry and peace were made equally welcome. Before the close of the meeting, many pleasant acquaintances had ripened into friendship; and we venture to predict that individual members of the Institute will be found hereafter slipping over the border, to renew at greater leisure the experiences which proved on this occasion at once so agreeable and so brief. We need but mention, to those who were there, the informal talks in the halls of the University and the Geological Survey, the charming reception at Sterry Hunt's, and the various public excursions and entertainments, culminating in the memorable Garden Party at "Terrace Bank," to call up a host of cherished recollections. But to these must be added the memories of private courtesies and pleasures, concerning which this is not the place to speak in detail.

We were personally so fortunate as to occupy a room in the Windsor from the window of which we could overlook a large part of the city, with the broad St. Lawrence beyond. We can conceive nothing more delightful than to see the sun rise on a dewy morning over such a scene. The broad glow upon the river, while yet clouds and mist overhang the city; the lighting up of quaint roofs and graceful spires; the sight of awakening industry, too far beneath for sound—it is a spectacle, after gazing upon which one goes back to bed with poetic enthusiasm!

Beautiful, likewise, is the view from the famous Mountain Park, for which Art has done much and Nature more. Pittsburg has heights from which, occasionally, when the smoke permits, a noble prospect may be obtained; and after the extraordinary fair weather attending the late Pittsburg meeting of the Institute, it does not become us to say that such opportunities are rare. Yet it may be frankly admitted that Montreal, as spread out beneath the Park, surpasses not only Pittsburg, but almost all large cities, in its whiteness, amounting, under the clear sunlight, to positive splendor. The prevalence of light-colored stone buildings is responsible for much of this appearance. But the city abounds also in architectural beauties. Its numerous churches and other large edifices are well worthy of study, one by one, and, combined in a single grand prospect, are profoundly effective. The streets and shops seem half-English, half-American; the churches and markets impress one who wanders among them like the scenes of Europe. Montreal is a mixture of Quebec and Toronto—not so foreign or antique as the former, and not so bustling and modern as the latter. As for that portion of its people with which we came in contact, we can only say that they convinced us anew (if we had needed such proof), that cordiality and refinement are not matters of latitude or longitude, and that fellow-feeling is not confined to fellow-citizens.

Oh! yes, we shot the rapids—and tried to feel alarmed, though without much success. A member who stood on the edge of the hurricane-deck, and almost lost his balance, experienced, we understand, the appropriate thrill. There was also heard, above the roar of the waters, a momentary squeal, which may have been the expression of feminine terror; but nobody owned the maternity of it, and perhaps it was the rudder-post. The fair dame who talked so steadily to a Montreal beau that she did not know when the rapids were passed, was forced to console herself with the consciousness that the current of her conversation was swifter and stronger than any thing the St. Lawrence could exhibit. To her request that the captain would turn about and go *up* the stream, that

good-natured official returned an unsatisfactory answer. "He hadn't time." But he was inwardly aware that, if he had tried *that* experiment, he would have had eternity!

We would fain dilate upon the trip to the Victoria Bridge and through the ship-canal (which made us to blush for our little Erie) and down the harbor. We long to tell how naughty Mr. President COXE and a score of others would go on board H. M. S. Tourmaline (to see if it was like H. M. S. Pinafore) in spite of the programme, thereby delaying the Great Lunch, which consequently had to be eaten in a hurry, and the post-prandial oratory thereof cut very, very short. But we might be suspected, as among those who missed the Tourmaline, of a mean and petty jealousy; and we forbear.

We gave, last week, an account of part of the proceedings at the private banquet held at the Windsor Hotel. In obedience to the tacit understanding with regard to these occasions, we shall not report further its sayings and doings. But some quite general remarks concerning it will not be improper. It has grown to be a custom at each meeting of the Institute; and we think, under some form, it will continue to be a custom, that those members who feel inclined to join in an entertainment of this kind shall do so on some evening during the meeting. All that the Council or the Local Committee has to do with the matter is to leave an evening free for the accommodation of the would-be diners and their guests. Now, apart from the social pleasure of the thing, it is the only opportunity for the recognition and return, at least in a partial way, of the courtesies received by members; and in this aspect of the case, it seems to us an admirable arrangement. It was not possible at Montreal to invite more than a few representative gentlemen and ladies from among our entertainers; but we believe that those who honored us with their presence found it no burden. Several of them were among the speakers; and we can not be blamed if we depart from discreet reticence so far as to make special mention of the delightful talk of Principal DAWSON, whose genial and sympathetic nature made him one of us at once.

Nothing can be more evanescent than the memory of the material part of a dinner. Yet it is a satisfaction to recall, however vaguely, that this dinner was a good one, and well served. We have forgotten the *menu*; but we remember the main fact. We remember also that twenty-five or thirty ladies, in all of whom we had become deeply interested, looked positively angelic (DODD'S express having brought their Saratogas just in time for this one display before re-packing), though they needn't have made quite so much fuss over TOM DROWN'S speech. It was enough for him to get the Chromo, without being also, to such a tearful extent, the "Star of the Evening, Beautiful Star." Some other fellows would like to be wept over, occasionally!

It is true that all good things come to an end; but the Institute meetings are longer about it than any other good things we know. If you think a mere adjournment terminates the fun, you are greatly mistaken. After that, there comes the splitting up into parties for the "go-as-you-please" race home—the struggle being who shall find out the longest road. And then, for days after, people keep meeting people unexpectedly at cross-roads and way-stations, and waving handkerchiefs from departing trains; and the groups dwindle to twos and threes; and at last you get home, and life seems quite flat for a day or two.

After our Montreal merry-making, some went one way and some another. A goodly company of us, by the invitation of CYRUS BUTLER, renewed the associations of Lake Horicon, dear to us already from the days of the Institute meeting of October last, and dearer yet to some of us by all the sanctity of love and death. The mountain we climbed, the waveless bays on which we floated, the fairy isles we trod—are they not henceforward a part of our lives? O happy friendships! in which are blended not only the memories of joyous, shining Montreal, but, deeper yet, the abiding vision of Horicon's unspeakable, unalterable peace! *

ANTHRACITE MINING IN PENNSYLVANIA—INSPECTORS' REPORTS.

The reports of the Pennsylvania Inspectors of Mines have become valuable records of the condition of anthracite coal mining; and they are generally free from the exhibition of stupendous ignorance or inconceivable idiocy which for years characterized this volume of Pennsylvania official literature.

Progress is still possible, however; and while we recognize the improvement made, and are grateful for the valuable compilation of facts before us, we venture to make a few suggestions.

Mr. PARTON, the inspector of the Pottsville District, seems to have a very inadequate idea of the duties of his office when he makes his report simply a tabulated list of the accidents and of the collieries in his district, without a word of comment. The inspectors, fortunately, are not all so niggard of their experience, but comment, generally with good, practical judgment, on the causes of accidents which come under their notice. They seem, however, to draw out to excessive length their reports with minute details of the most unimportant circumstances. These details are not of the slightest value to any one, and encumber the useful remarks in such a volume of verbiage as to discourage even a patient reader.

The statement of the ratio of lives lost, etc., to tons mined would be much more valuable were the statistics of production correct; but, in previous years particularly, the aggregate of tons mined as reported by the several inspectors greatly exceeds the total actual output. It would appear almost as if some of the past, if not the present, inspectors were over-anxious to make it appear that the ratio of lives lost to tons mined in their district were more favorable than elsewhere. It is, indeed, a gratifying fact that the loss of life has greatly decreased since the inspectors were appointed, and we gladly record it as a confirmation of the wisdom of the enactment of what is known as the "Ventilation law," to the drawing up of which we had the honor of contributing.

The saving of life is not, however, the only benefit which has resulted from the appointment of inspectors. The mines are much better worked and ventilated than ever before; in fact, in no other part of the world is mine ventilation so perfect as in the anthracite fields of Pennsylvania to-day. Were the coal mines of Europe as well ventilated, we should hear less of the fearful explosions which are recorded almost every week, and which have given coal mining a reputation, by no means deserved, of being an exceptionally hazardous occupation.

While on this subject, we can not refrain from noticing in the report of Mr. WILLIAM S. JONES, the inspector for the Scranton District, some very wild remarks about ventilation and other matters that show not only a lamentable and inexcusable amount of ignorance in so intelligent a man, but an astonishing amount of self-complacency. Thus, he gives a long and very ridiculous harangue, in the spread-eagle style, on the causes of accidents by explosion of fire-damp. In his ignorance of the literature of the subject, and in the evident absence of practical knowledge, he seems to think that he has now first discovered that a large amount of air will render fire-damp inexplosive. The discussion of the causes of accidents from falls of roofs elicits the following startling theory: In speaking (p. 130) of the neglect of the miners to set props under a bad roof, he says, "They allow the roof to sag and the fissures to open, admitting the action of the air, the pressure of which is a powerful agent to cause the roof to fall. In allowing the air to enter these fissures in this manner, they admit a pressure of nearly fifteen pounds to the square inch, which acts as an irresistible wedge, forcing the parted strata down. This pressure is no less effective because it is undiscernible. And as the opening of the fissures increases the surface for this pressure to act upon, the weight of the overhanging mass also increases, while the power of resistance decreases in the same proportion, until the whole mass gives way, crushing all who may be underneath. This principle is never considered by the miners and rarely, if ever, considered, or even understood by mine bosses." And no wonder; for it is a "principle" which only such gifted scientists as MCANDREW or the inspector for the Scranton District can master. Is it possible that the MCANDREW mantle has fallen upon the shoulders of Mr. WILLIAM S. JONES?

But the Scranton inspector is industrious, and has collected a vast amount of valuable data in his report; and we have no doubt that a little practical experience and a little more book-learning will make him more modest and more useful, and change the ridicule which some of his pages provoke into thanks for plain, judicious discussions of the data which he is industriously collecting. We trust Mr. JONES will forever abandon, as wholly inappropriate in such a place, those exhibitions of "Fourth of July" oratory which distinguish his report in the present volume.

From Mr. T. M. WILLIAMS we have a report somewhat less elaborate than his previous efforts, due, no doubt, to his continued ill-health, contracted by over-work in the conscientious and efficient discharge of his onerous duties. Mr. WILLIAMS'S reports are always practical and sensible, and we trust we may long continue to have the benefit of his extensive experience on the important questions connected with coal-mining.

On page 104, *et seq.*, Mr. WILLIAMS sums up in convenient tables a vast amount of information. The statistics are made out for each colliery. We can take the following totals and averages: There were 61 collieries in the Wilkes-Barre District in 1878, of which 11 were idle. There were 52 breakers, of which no less than 15 were unemployed, and others were occupied only a portion of the time. The amount of coal mined was 3,957,934 tons, being 752 tons per breaker per day worked, and 10·26 tons per miner per day worked, and an average of 2·29 tons per employé per day. The total days' work expended in producing this coal amounted to 1,770,534 days, contributed by 13,045 employés. Of the employés, there worked on the surface 1721 men and 2674 boys; and in the mines, 1505 boys and 7144 men, of whom 2860 were actual miners.

Mules used in and about the mines, 1310. There were 747 boilers required to produce steam; these boilers are almost invariably of the plain cylinder type, and usually 30 to 34 inches diameter by 30 to 34 feet long.

Mr. T. D. JONES, the inspector for the Lehigh District, gives us the most elaborate report in the volume before us.

After discussing the several accidents which have occurred in his dis-

trict, he notes the improvements made in the several collieries, gives several very interesting sections of the Lehigh coal basins, and detailed sections of the several beds of coal worked, and gives, in tabular form, by collieries, an immense amount of valuable information.

We learn, for example, that in 1878 there were 51 collieries in Mr. T. D. Jones's district, of which seven were not in operation during the year. These collieries were worked by 63 inclines, and 11 by tunnels and drifts. It appears there is but one vertical shaft in the Lehigh District, owing, no doubt, to the narrowness of the basins, their uncertain depth, and the high inclination of the coal-beds. There were 52 coal-breakers; and the 44 collieries actually in operation, during the year, worked a total of 5564 days, or an average of 126 days, which was 2812 days less than these collieries worked in 1877 when there was no coal combination governing and limiting the trade.

There were employed under ground, 2355 miners, 1216 laborers, 575 boys and drivers, 783 foremen and "company men;" total, 4929. And on the surface there were 302 mechanics, 1206 foremen and "company men," 2122 drivers and slate-pickers, mostly boys; total, 3630: grand total, 8559 men and boys. By "company men" is meant men working for the company, on day-wages, as opposed to men on contract-work, or laborers employed by the miners. There were consumed, 51,492 kegs (25 lbs. each) of blasting-powder, and produced 2,737,581 tons of coal. There were 1089 mules employed in and about the collieries.

The value of this, and much similar information, furnished in some of these reports and not in others, and the total absence of any index, call attention again to some desirable innovations which could be made hereafter.

The inspectors might, with great advantage, devote less space to the unimportant details of the accidents, and the reports of all that is said at the coroners' inquests, and simply summarize, concisely and impartially, the facts. It would also add greatly to the value of these reports did the inspectors adopt the same forms for the collection of statistics, so that the figures would represent the entire anthracite region. Each inspector should also make a full index for his report.

Without in the least disparaging the work of the inspectors, it must be evident to every one reading these annual volumes how much more useful they would be were the information scattered through them collated and discussed as a whole by some one having access to the current foreign literature upon the subject; so that not only the lessons learned in our own mines, but those acquired in foreign mines, might be made available for all. In other words, the appointment of an Inspector-General, as it were, who, receiving and editing the reports of the several inspectors, would summarize and discuss the facts, now disjointed and unavailable without much work, and who would furnish the most recent results of foreign practice in mining, would, we believe, be an advantage to the inspectors in many ways, and, so far from depriving them individually of the credit of their work, would secure its more general recognition.

We shall revert to these reports again, and collate the vital statistics scattered through them, and, at the same time, suggest subjects that we trust the inspectors will take up in future reports.

SAN JUAN SILVER MINES.

Special Correspondence of the Engineering and Mining Journal.

In my last letter, speaking of the Dolores Carbonate mines, I stated that the route to Rico via Silverton was by trail. I write this from Silverton, and find that I made a misstatement. The toll-road from Antelope Park into Silverton has lately been completed, and the machinery for Melville & Summerfield's new chlorination works has just been brought into Silverton by wagon, at a cost of two dollars per cwt. from the end of the track. From Silverton to Rico via Ophir by trail (a summer route only) it is about 34 miles; but I am told there is an all-winter route from Alamosa, the present terminus of the railway, to Rico via Animas City, the distance being about 240 miles. The toll-road into Silverton is owned by a company of the citizens; capital stock, $10,000; $7000 cash was subscribed, and the cost of the road was $7500. For the last three weeks, it has been paying at the rate of $25 per diem. A friend of mine has just came over it in his buggy from Del Norte, and he reports the grades as very fair indeed. Next spring, however, still further improvements will be made by Stony into Cunningham Gulch, thus avoiding the steepest places. It was a plucky undertaking, and successfully carried out.

Silverton, like Ouray, has been somewhat quiet this season, for two reasons. One is, that Greene & Co., the pioneer smelters; owing to an unfortunate financial loss in their Eastern business, became embarrassed, and were unable to run their works here; but they have now arranged matters so as to be able to fire up again next spring. The other is, that being only 35 or 40 miles from Rico by trail, nearly every one went over there when the carbonate excitement was at its height; this has cooled down somewhat, but will probably break out again in the spring with redoubled fury, as reports of new strikes of rich stuff come in daily. At Sweet's sampling works here, I saw to-day 100 sacks of ore from the Charlie Newman mine, that sampled 334 ounces silver, and $3\frac{1}{10}$ ounces gold, to the ton.

Melville & Summerfield expect to make a short run with their new chlorination works before winter closes in, and will buy ores at once, or, rather, I suppose, contract for next spring's dumps, as the demand for ore has been largely in excess of the output this year in the San Juan, and all has been bought up. Messrs. Crooke Brothers, who own the North Star mine here, have grown tired of shipping their ore to their works at Lake City for treatment, and will erect smelting works here next spring to treat their own and customers' ores; in fact, they are now burning firebrick at Lake City for this purpose. From here, I made a trip to Gladstone (seven miles), to visit the chlorination works of the San Juan Reducing Co., an English enterprise. Owing to the absence of the manager, Mr. J. H. Ernest Waters, on business in Old Mexico, it was late before they began to run, and though a great many sales of mining properties in Poughkeepsie and other contiguous gulches have been made this season to Eastern parties, they were effected so late that arrangements could not be made to produce until winter set in; consequently the ore supply has been very limited, and the ore they ran on was principally from the Tribune and Columbia mines, owned by Mr. Brodrick Cloete, the President of the company, and also on ores from the Sneffels District, which latter have proved especially clean and well adapted to the leaching process.

Next spring, this company contemplates putting in flowing furnaces so as to be able to treat lead as well as leaching ores, many of those brought in being entirely unsuited to their present process. The surrounding timber is not suitable for burning good charcoal, and therefore smelting in blast-furnaces would not be economical, whereas the nature and quality of the fuel will render treating by reverberatory furnaces both economical and expeditious. They have a saw-mill in connection with their works, and one of the best signs of coming activity is that the bunch of mines at the head of Poughkeepsie Gulch (of which more in my next) have been supplied by them with no less than 75,000 feet of lumber during the past three months. As this has all been used for building miners' cabins, it would seem to represent a large amount of solid winter work. A road has been just completed from the works to the summit of the divide between the waters of Cement Creek and Poughkeepsie Gulch, with easy grades, so that ore can now be hauled from the above-mentioned mines to Gladstone, at a cost of say one third of that formerly paid for packing on burros, a wagon bringing down a load equal to that packed by 30 jacks. The saw-mill, which has the largest turbine-wheel in the country, is now turning out between five and six thousand feet of lumber per diem.

All of which looks well for the future of this section of the San Juan.

Silverton, Oct. 2. W. W.

MONTANA MINING NOTES.

Special Correspondence of the Engineering and Mining Journal.

Yago Gulch is the name of the recently-discovered placer-diggings, on the North Fork of the Judith River, in the Judith Basin, Meagher County. Bed-rock has not been reached yet, and, until it is, nothing definite can be known of the value of the ground. The reports are now more or less conflicting. All the ground in the gulch has been staked, so that there is no opening for new-comers.

R. S. Hale is building a ditch across Grizzly Pass, to secure water for working Grizzly, Tucker, Holmes, Big Indian, and adjacent ground, through Lump Gulch. If completed in time, it will open up next season much valuable ground.

The officers of the Penobscot Company have published a sworn statement, showing that the amount of capital stock of said company, issued for the purchase of mine, machinery, and transaction of business, has been $50,000, and that the company is free from debt. So far, very good; but the stockholders anxiously await a dividend, none having been declared since the company organized.

Messrs. Nelson & Fisher, on Beaver Creek, have been running their double arrastra very successfully since starting up. They have just made a contract with Captain Guyer for the erection of another double arrastra, and the crushing of 500 tons of ore. The ore averages about $25 per ton.

The following table shows the number of ounces and value of gold and silver deposited at the United States Assay Office, Helena, by counties, for the six months ended June 30th, 1879:

		Gold.		Silver.	
		Ounces.	Value.	Ounces.	Value.
Beaverhead	County	40·15	$22.59	.....	.....
Choteau	"	.....	.....	.....	.....
Custer	"	1·38	25·82	.....	.....
Deer Lodge	"	1,703·59	30,208.71	158,291·10	$159,457.39
Gallatin	"	260·08	4,713.92	.....	.....
Jefferson	"	1,071·04	18,702.37	1,471·00	1,198.29
Lewis & Clarke	"	5,912·76	92,733.12	.....	.....
Madison	"	1,007·59	16,309.45	.....	.....
Meagher	"	573·14	10,245.55	.....	.....
Missoula	"	43·32	858.10	.....	.....
		10,613·05	$173,819.63	159,762·10	$160,655.68
British America		31·30	580.17		
		10,644·35	$174,399.80		

Of the counties in Montana, nine of them produce bullion steadily, as the above table shows. The larger part of the bullion produced in the territory does not pass through the United States Assay Office, but goes directly East. The tenth county—Choteau—has, in the Bear Paw Mountains, undoubtedly large deposits of galena ore, rich in silver. Many specimens have been assayed, which contain silver in quantities from 5 to 80 ounces to the ton, besides large amounts of lead. The greater part of this county is taken up by Indian reservations, which prevents any extensive exploration or development. Can any other State or territory show a record like this?—all the counties within its borders containing paying quantities of gold or silver, and in many of them both metals.

The Montana Company, at Wickes, after some years of shameful mismanagement, has been absorbed by a company called the Alta Montana Company, after the payment in full of all indebtedness of the old company. The new company has a capital stock of 500,000 shares at $10 per share. The certificate of incorporation has been filed, and the transfer of the property taken place in New York. The gentlemen connected with this enterprise are well-known business men of New York City: A. S. Barnes, Alanson Trask, Michael Snow, Tasker H. Marvin, George C. Robinson, Lucius M. Sheldon, and Stephen H. Harriman, of New York; S. T. Hauser, President First National Bank, Helena, and Cole Saunders, Montana. William W. Wickes, New York, President, will remain here this winter in charge of the financial management. Cole Saunders will be Superintendent; Ernest Granier, Ph.D., late Professor in School of

Mines, Golden, Colo., Metallurgist. Charles E. Stevens, formerly with Taylor's mill, Georgetown, Colo., will have charge of the Krom mill, amalgamating and bleaching departments. Mr. Grün, who for five years has had charge of the smelting department of the Hecla Company, Glendale, will have charge of the smelting furnaces. The company is erecting two new reverberatory furnaces—capacity, 15 tons each; also, one ten-ton and one twenty-ton water-jacket furnace, and one cupel furnace. They have already one roasting-furnace of 6 tons' capacity, three Bruckner cylinders, a Krom mill for separating the quartz from the mineral, and concentrating before roasting—capacity, 35 tons in 24 hours. They have a battery with 5 stamps, with arrangements for 5 more. The leaching and amalgamating machinery has a capacity of 10 tons per day. The company owns the North Pacific mine—length of claim, 2200 feet; the ore, on concentration, averages 60 per cent lead and 80 ounces silver to the ton; and the Alta mine, within 1½ miles of works, the ore of which assays 20 per cent lead and 60 ounces silver; besides several other less important lodes. The company has also leased the Faith lode, adjoining the Alta, for three years, with privilege of purchase; and one or two other veins of ore. The company is pushing the work of erection as fast as possible, and hopes to be in running order by the 15th of October. This is an important undertaking; and, being upon a firm financial basis, with men of skill and ability at its head, it will prove a factor for the development of this district, the value of which it is difficult to estimate. We predict, from the ability of the men in charge of the several departments, a successful run from the start. We shall report its operations in the future. TUBEROSE.

COLORADO MINING NOTES.

Special Correspondence of the Engineering and Mining Journal.

Since my last, I have not had the opportunity of visiting the Rock Creek mines. The only news from that district is that Mr. Harris, of Leadville, backed by Eastern capital, has completed arrangements to put in smelting-works near the mines, having also obtained an interest in some of the mines. The contracts for the lumber are already made, and a toll-road is building from Gothic City. This is a good move, as most of the ores are low-grade galenas, and coke can be obtained abundantly and cheaply from Crested Butte. There is a coal-bank down on Rock Creek; but the difficulties of making a road up the creek are too great, even if the coal made a good coke.

At Copper Creek, a fine strike of gray copper ore has been made, reported as several feet thick, and carrying, by various reports, from 70 to 220 ounces of silver. The Sylvanite is said to have changed hands at $150,000—quite a decline from the $500,000 talked of in the spring. They have undoubtedly a very rich mineral streak in the vein; but there has been a seeming reluctance since the mill-run at Leadville, to put the mine—that is, the large bulk of ore—to the test that mill-runs give.

A new field, that is attracting much attention just at present, has been found on Poverty Gulch, a little branch to Slate River, about 12 miles distant from Crested Butte. Here Mr. Baxter had located some claims last year. In working assessments this year, fine mineral was found, and new locations made. The mineral is largely galena, mixed with copper pyrites, zinc-blende, and antimonial silver. The veins are strong, and show large bodies of mineral. The mixed ore assays about 100 ounces, but picked specimens will assay from 600 ounces upward. Many prospectors have turned their attention here, the ground being pretty well staked already.

At the Ruby Camp, no new developments have been made, except that the assessment work on many of the undeveloped claims has shown that the veins give abundant promise when they shall be systematically opened the coming summer. Among these, are the Mountain Gem continuation of the Forest Queen, which has been sold in part at a good price. Messrs. Hurst & Payton's fine group of prospects; the Babe, De Forrest, and Mosquito, showing rich mineral, assaying in specimens about 400 to above 800 ounces. The Independence shows a large body of low-grade galena, with a streak of richer ore, assaying, at times, some gold. It seems to be a peculiarity of these veins that the ore will at times give a trace of several ounces of gold; at others, not a trace. No free gold or mineral has been detected in place; but the decomposed ore will at times show colors in a pan.

The Sandwich shows extremely well for the work done, and will undoubtedly prove valuable property when developed. There is a large body of arsenical iron, which seems to be the forerunner of the rich ores, at the lower part of the mine, while up on the hill-side there is a band of ruby ore. As this iron assays well, apparently free from rich silver ores, I consider the promise very good indeed.

The Monte Cristo continuation of the Bullion King looks well, but the owners put a higher price on it than development warrants.

The ore-producers continue to average about the same, one day looking up, and the next down. The Forest Queen heads the list, both in amount of ore in sight, and its very rich quality. The vein has been opened on the surface at several points, and exposes a rich band of mineral, in places a foot or two wide, of solid mineral. About two tons of ore were taken out one day last week, which, I should judge from what was being sacked when last there, would assay 500 ounces, or, possibly as high as 1000. The ore is massive arsenical pyrites and ruby silver, the latter sometimes making the larger bulk of the specimen. It has a beautiful appearance when freshly broken. The last mill-run of the Forest Queen, made at Hill's, Denver, was 1080 ounces silver, 4½ ounces gold. The vein shows great improvement in quantity of ore. The mine has been sold for $100,000.

The Ruby Ring, adjoining, has been under a cloud, both as to mineral and as to trouble with jumpers. The parties engaged in working report that they have good indications in the float at the new point of opening. They will have to sink through about 15 feet of drift before reaching the vein, but have the work nearly completed. As their ore was assaying 220 ounces in lots of several tons, at the time the "horse" was struck in the first opening, it is very probable that they will soon join the ore-producers.

The Lead Chief has been preparing for winter by building shaft-houses, etc., but has kept producing small lots of ore of good quality, and expects soon to increase the amount, since the improvement continues as depth is gained. This vein has passed through two small seams of coal, changed to anthracite.

The Bullion King last week opened into a fine seam of rich ore that did not require much cobbing; but late reports are, that the mineral is more scattered again. It is a good mine at its worst, especially with means of treating second-class ores.

The tunnel of the Ruby Chief has reached the vein; but the ground is much broken. There is a narrow seam of rich ore and much low grade. They are drifting along the vein, with great improvement in the amount and richness of the ore, and expect to join the shippers.

With the exception of the parties working the ore-producing mines and a few prospectors, the mine-owners, having completed assessment work, have gone out until next season.

The road has been so far completed down Ohio Creek to Gunnison that several wagons have come into camp. The road down Coal Creek will be completed before the end of October.

The smelting-works at Crested Butte, on Coal Creek (a local name, not on the map), are so far completed that they can be started at once in the spring.

The coal seam of the Crested Butte Company is opening up finely, and by spring will have the dead-work completed, so that they will be able to produce any amount cheaply.

An analysis of average sample of many tons of coal gave: Water, 1·5 per cent; volatile, 22·8 per cent; fixed carbon, 68·7 per cent; streak almost black; ash, 7·0 per cent. The coke amounts to 76 per cent nearly, and contains 11·4 per cent ash when the coal is picked. Average sample of some 30 tons, 17 per cent. Coal having been obtained in dead-work, no care had been taken in getting clean coal.

This coal seam appears to rise toward the south, and change in quality as it crops out higher up the mountain. On Baxter's Creek, the outcrop appears like cannel coal, and gives a brown streak. An analysis gave: Volatile matter, including water, 35·4; fixed carbon, 57·6; ash, 7·0. The coke from this coal is poor and only partially melted together.

As the seam is opened westward, the quality improves, and the thickness has reached 5 feet. Fossil leaves, nuts, and shells are found in the sandstone above the coal. EZUEST.

CRESTED BUTTE, GUNNISON CO., COLO.

ARKANSAS SILVER MINES.

Special Correspondence of the Engineering and Mining Journal.

The two following claims should be added to the list given by me in the ENGINEERING AND MINING JOURNAL of October 4th:

The Copper and Silver Lode, in Section 8, Township No. 2, south, Range 23, west: Argentiferous galena, calc-spar, malachite, and copper pyrites; gangue, quartz; depth of shaft, 10 feet.

The Montrose, in Section 18, Township No. 2, south, Range 23, west: Chloride of silver, argentiferous galena, carbonates; gangue, quartz; depth of shaft, 12 feet.

My object in giving you in detail the mineral formation of these various mines is to show the great uniformity that exists throughout the entire district, and to prove to your satisfaction that the conditions are such as to warrant the opinion that their opening and development would be attended by the most favorable results.

The question now agitating the minds of a majority of the claim-owners is how to interest our capitalists sufficiently to cause them to invest, for purposes of development, a small portion of their idle capital, offering inducements which can not but prove acceptable.

It is my candid opinion that an investment of $50,000 would secure a ruling interest in a majority of the best mines in the district, and erect sufficient machinery to successfully develop them.

The confidence of the people of Arkansas in the richness of their mines seems to be unbounded; and were it not for their financial prostration, they would not, for a moment, look to outside capital for their development.

The croppings throughout the entire district give evidence of great richness, assaying from $2.50 to $6 to the ton; this, from samples gathered indiscriminately by Messrs. Church, Phillips, and Snow during their recent visit to the said locality, the correctness of whose assays can no doubt be fully verified from the representative specimens I now send you, taken from the mines during my late investigation.

The facilities for successful mining operations are extremely favorable, and the climate of a temperature that will warrant the working of the mines during the entire year.

It is the intention of a company of Milwaukee capitalists to erect at once suitable works for smelting and refining purposes, with a capacity sufficiently large to treat with dispatch any quantity of ore that may be placed in their hands. When this shall have been accomplished, and the miners become convinced of the company's responsibility, there will be no further delay in shipping the ore to the works, which are now approaching completion and awaiting the arrival of machinery.

I would advise, however, the introduction of a few stamp-mills, with a view of facilitating the handling and working of the large quantity of mineral now lying at the various dumps, which, if properly treated, would yield sufficient to enable its owners to make many necessary and valuable improvements in the working apparatus of their mines, without which but little progress can be made.

It can readily be understood why I am forced to the conviction that the mining operations now progressing in various portions of Arkansas must result favorably, when it is made apparent that the miner, in many instances, realizes the moment the earth is broken, and a depth of eight to ten feet strikes the true quartz vein, which runs from 2 to 14 feet in thickness, and is often exceedingly rich in mineral. This, together with the fact of his being at but slight expense for fuel, provisions, and labor, makes it improbable that the opening and development of these mines will result otherwise than favorably.

I would here suggest, as the surest and most satisfactory method o arriving at the true merit of the Mount Ida Mining District to those contemplating investment, the employment of an educated and practical mining engineer to visit the said locality, and make a complete personal

examination of its mines, remaining sufficiently long to become thoroughly familiar not only with their advantages, but with every thing likely to impede their development. Then, should his report be favorable, there can remain no reasonable cause for delay in the investment of capital.

In this connection, I will state that a number of St. Louis capitalists have been giving the matter of investment serious consideration, and, by "pooling," have succeeded in raising a fund sufficiently large to enable them to commence immediate operations, should they so desire; and, as their intention in entering into this arrangement seems to be solely for purposes of development, it is safe to presume that they regard the amount thus raised merely as a "feeler," intending, should the investment prove successful, to advance any amount that may be required to place the mines upon a full working basis.

My remarks upon the mining prospects of Montgomery County are alike applicable to the entire mineral belt embraced by the counties of Polk, Sevier, Pulaski, Saline, and Scott, it being of the same geological formation, and offering the same facilities for successful mining operations.

The main difficulty under which not only the miner, but the entire district, now labors, is the absence of competent and reliable mining engineers to direct him in his movements.

After a thorough personal examination of the mines of Montgomery County—principally those in the vicinity of Hot Springs and Silver City—I deemed it advisable to retrace my steps, following the Ozark range north into Pulaski County, making Little Rock my base of operations. Here every facility was afforded me, by many of its public-spirited citizens, to insure a thorough and reliable investigation of the mines lying in its vicinity, which I proceeded to do immediately upon my arrival. I began with the Kellogg, lying in Sec. 29–30, Tp. 3, north, range 11, west. It afforded me, owing to the extensive developments which have been made, the best opportunity of determining with accuracy the nature and extent of its mineral formation.

I will here state that the principal cause of the want of success hitherto has been principally owing to the financial embarrassment of its different owners, caused, no doubt, by the employment of unskilled labor in its development.

The first company that leased the mine was organized at Little Rock, Arkansas, in 1848. Under its direction, large quantities of mineral were taken out and shipped to Swansea, in Wales, realizing more than $337 a ton. The company prospected in various directions with the most favorable results. In 1849, owing to the death of Kellogg, its owner, and the discovery of gold in California, the company could not prevail upon the miners to remain at the mine, and was consequently compelled to suspend operations.

The mine, up to this period, had been worked exclusively for lead, the lessees being entirely ignorant of the richness or character of its other mineral.

In 1862, the Confederate government took charge of the mine, and worked it for war purposes, shipping the ore to Arkadelphia for treatment.

The discovery of silver ore seems to have been made in 1865, by E. T. Cox, afterward State Geologist of Indiana, who found it in large quantities around the old diggings, it having been thrown aside as valueless.

This discovery led to the purchase of large tracts of land in the vicinity, for mining purposes. Search for the precious metal began at once, and was carried on until the location and character of the mineral body were sufficiently determined to satisfy the company of its richness. Further developments ceased, for want of capital.

In 1872, the mine was sold to a number of Memphis capitalists, who are now its owners, but who have not, as yet, shown the least inclination to commence operations. I am informed that it has been offered for sale for $50,000—a sum which could almost be realized from the several hundred tons of rich ore now lying at the dump, and not much inferior to the samples gathered by your correspondent, and sent you for examination and assay.

I am informed by Mr. E. H. Chamberlain, a former superintendent, in whose veracity I have the most implicit confidence, and under whose supervision most of the developments were made, that the mine has been worked sufficiently to determine, beyond question, the existence of a true fissure-vein at a depth of 120 feet; the truth of which I would have personally determined had it been possible to enter the shaft, which, at the time of my visit, contained about 40 feet of water.

It is the opinion of many well-informed gentlemen, who have resided in the immediate vicinity of the mine since its opening, that there never was discovered any other than "pocket" ore, and that this fact was the main cause of the abandonment of the mine and the financial ruin of the lessees. This view of the case, however, weakens materially when the fact becomes known that one of the strongest advocates has been negotiating for the purchase of the mine at a price which must necessarily prove his confidence in its stability.

I am of the opinion that the mine, if properly worked, would prove to be one of the richest in the State, for the reason that its mineral body, wherever penetrated, gives substantial evidence of its richness and strength; making an excellent showing of argentiferous galena, sulphuret of copper, zinc-blende, feldspathic iron, and gray copper, the latter assaying over 1200 ounces, and the galena from 40 to 80 ounces to the ton.

The facilities for rail transportation offered by the Iron Mountain and Fort Smith roads are all that can be desired; the two tracks running within six miles of the mines, and would, no doubt, be extended directly to them should occasion require it. There would then be unbroken communication with the smelting-works at Cheltenham, where the ores could be treated successfully—they being of a refractory character and hard to work.

I am fully aware of the great responsibility attached to the publication of this report; but having strictly carried out your instructions "to send in nothing for publication unless absolutely reliable in every particular," I rest under the conviction that I have faithfully performed my duty, and have given you nothing for publication other than absolute facts, which are incapable of contradiction.

I would state, in conclusion, that it is my intention to visit, without delay, the various mines of Missouri, lying within this great mineral belt, ending my investigation at Fredericktown, the seat of the latest and most important developments, where I shall remain long enough to enable me to lay before you a full and reliable report upon their scope and merit.

St. Louis, Mo. Henry M. Hook.

SAN JUAN (COLO.) NOTES.

Special Correspondence of the Engineering and Mining Journal.

POUGHKEEPSIE GULCH.

There is, no doubt, a gradual advance taking place in the mining districts of the southern portion of Colorado, especially in San Juan. This summer, a great many mines have been sold here to Eastern capitalists; and in one district alone, not extending over 4 square miles, in the famous Poughkeepsie Gulch, more than two millions of dollars have been paid for mines this season. Among the most prominent mines which changed hands are the Alaska, Acapulco, Red Rogers, and Adelphi, now owned by Lieutenant-Governor Tabor, of Colorado; and about three weeks ago, the Bonanza mine, in the upper part of the gulch, was sold for not less than $110,000. This vein, developed with a tunnel of more than 250 feet, shows a streak of mineral of unknown width (no cross-cut has been made yet), consisting mostly of gray copper, cemented by heavy-spar. Mill-runs, made from ore out of this mine, gave an average of 200 ounces silver to the ton. The company which bought the Bonanza from the former owners (Messrs. Biedell & Oberto) is organized as the Kalamazoo Bonanza Mining Company. Some of the directors came in from Michigan, some time ago, and they intend to do considerable work this winter. Contracts have been let already, and buildings—a shaft-house, a tunnel-house, and a boarding-house—are soon to be erected.

The west end of the mining claim extends 250 feet into Lake Como, and the outcropping of the vein can be traced for a long distance through the clear water. Five other veins, all showing good mineral on the outcroppings and in the workings, run into and through this lake in various courses; and it must be supposed that on the bottom of the lake, which is, in some places, 85 feet deep, an immense body of very rich float will be found.

It is proposed, for the purpose of getting out this deposit of mineral—accumulated on the bottom through a period of thousands and millions of years—and more particularly for the purpose of draining the mines in the vicinity, that this lake, which has a circumference of about half a mile, shall be tapped by a tunnel, the determination, course, and survey for which was recently made by the undersigned. This tunnel, to be commenced on the east side of the lake, will have a total length of 1058 feet, and will reach a depth of 70 feet lower than the lowest bottom of the lake, as it is to be supposed that the float in the bottom of the lake is of a considerable thickness.

The expenses for this work are not very heavy. Probably all parties interested in and around the lake will join together to bear the costs. A great deal—it may be, all—will afterward be repaid from the rich float.

Recently, the extension of the bonanza called Cañon Dago, together with Three Brothers and Discount, almost in the same surface ground, has been sold to a New York party for $85,000; and a Chicago firm, William Loeb, Finance Agent, bought, some time ago, a large property in the immediate vicinity of the bonanza. On the property of Mr. Loeb, work is pushed forward very rapidly. A contract of 400 feet has been let. Two large and substantial buildings are erected already, and all the provisions for the long winter months are in. The veins as yet are not very much developed; but wherever work is done, by open cuts on the surface, or by shafts, or by drifts, they find good mineral, averaging from 200 to 400 ounces in silver. The Poughkeepsie gulch, with its enormous quantity of fissure-veins, and good ores, too, will prove very soon the richest mining district in San Juan.

Moritz Stockder, C.E., M.E.

Lake City, San Juan, Colo.

ARIZONA NOTES.

Special Correspondence of the Engineering and Mining Journal.

The mines in the Tombstone, Patagonia, and Oro Blanco districts are developing extensive bodies of good ore. I have especial reference to the Contention, Toughnut, and Grand Central, in the Tombstone District; the Hermoso, in the Patagonia District; the Idaho, Montana, and Warsaw, in the Oro Blanco District. It is possible that six good mines may be found in the Tombstone, out of 1500 locations; and perhaps *three* in the Patagonia; and as many more in the Oro Blanco. Good mines are not often found; and when they are, it requires large sums to purchase them, and therefore, persons in the East ought to take all statements with great caution before investing in the hundreds of cheap properties now offering in the Eastern market. I inclose you an article clipped from the *Star* of the 21st of September, so that you may have a clear idea of what the solid miner recommends to all Eastern purchasers of mining properties. I feel confident, should they follow the advice given, that they, as well as the mining interest of this territory, would be benefited.

I think I can see in the near future large accessions to the Tombstone District, in both people and capital.

The completion of the mills, and the large shipments of bullion which will necessarily follow, will create an excitement only equaled by that of White Pine a few years ago, or that of Leadville of more recent date.

Star.

Some interesting laws of the variations of atmospheric electricity have been deduced by Denza from the regular data collected at the Observatory of Moncalieri. In Piedmont, there are daily two maxima of electricity, following the rising and setting of the sun, at an interval of some hours. Between these maxima is a minimum, which follows the passage of the sun over the meridian of the place. The annual maximum of the atmospheric electrical tension occurs in February, and the minimum in September. Before and after storms, the electrometer stands at zero, but, during their passage, it indicates very high tension. In calm and hot weather, the lowest values are observed. Negative electricity is generally due to storms or rain at a distance, or to a polar aurora.

MINING IN MONTANA.

The New York *Tribune* of September 30th, has a letter from its staff correspondent, Mr. Z. L. WHITE, dated Helena, Mont., September 7th, from which we extract the following information concerning the mineral resources of Montana:

"It is an axiom among good miners that the erection of mills and reduction works in a newly-developed mineral region should always be postponed until ore enough has been found to keep them constantly supplied.

"The two principal mines owned by the Alta Montana Company, of which Mr. W. W. Wickes, of New York, is President, are the Alta and North Pacific. The first of these is situated near the top of a mountain, about 1000 feet above the company's works, and, I should think, half a mile distant. The surface of the mountain is smooth, destitute of timber, and covered with rich bunch-grass to its very top, which is reached by following up a gulch between it and an adjoining hill, and then taking a zigzag up its side. The country rock of the mountain is granite, but in the Alta and North Pacific mines a porphyry dike appears above the vein in the latter, and below it in the former, probably filling up the space between the pay-ore in the two lodes, which have the same general direction and dip. The Alta mine has been opened by three tunnels. The upper one is 180 feet long, and is about 70 feet from the surface at its center. The average width of the vein in this tunnel is from 6 to 8 feet, the walls being quite irregular or wavy. The body of good ore in the vein is, of course, thinner. The middle tunnel is 368 feet long, and is connected with the upper workings by an incline 80 feet in length. The vein in this tunnel seems to average a little wider than above, and in a shaft that has been sunk 40 feet below it a solid body of paying ore 18 feet wide has been found. The first and second tunnels both follow the direction of the vein. Below both of them, a third tunnel has been begun at right angles to the vein, which is expected to strike it at a distance of 150 feet from its mouth. One hundred feet of this adit have been completed. In addition to the workings already mentioned, the company is sinking an inclined shaft from the surface, 300 feet west of the point where the vein was discovered, and this intersected the vein at a depth of 70 feet, showing a body of ore about 6 feet wide. The lode has been traced by surface openings for a distance of 2500 feet.

"The general course of the vein is northeast and southwest, and its dip is about 40° to the northward. The ore is principally galena with some carbonates of lead and traces of copper, antimony, and zinc. When freshly broken in the vein, much of it has the bright gray, metallic luster which distinguishes galena; but there is considerable gangue or waste rock mixed with it. All of the ore contains too much sulphur to allow it to be smelted or milled without first being roasted, and, when treated by the former method, requires the addition of iron ore to form a flux. In speaking of the grade of the ores, I am, of course, obliged to repeat what the officers of the company tell me. They say that the 1000 tons which have heretofore been taken out of the mine have averaged a yield of about 65 ounces of silver or $90 worth to a ton, and that 25 per cent of the gross weight of the ore has been lead.

"The other productive mine of this company is the North Pacific, formerly known as the Argentine. The general direction of this lode and its dip are the same as those of the Alta; its ore is of similar character and grade, except that it carries a larger percentage of lead. Its development consists of two tunnels driven in upon the vein, the upper one 75 feet long, and the lower, 75 feet below, 327 feet. These are connected by two shafts, and an incline shaft has been sunk on the vein 169 feet below the lower tunnel, at the bottom of which the richest ore in the mine has been found—assaying 105 ounces of silver and 46 per cent lead. I did not go into this shaft, as work is now temporarily suspended upon it, and it was partially filled with water. About 400 feet of levels have been driven from the lower tunnel. The product of this mine has been about 2500 tons, and ore from it has been shipped for reduction to Omaha, and to E. Balbach & Son, Newark, N. J.

"About three miles from Wickes and twenty-eight miles southwest from Helena are the Gregory mines, also in the Colorado District. The country in which these are situated is similar in appearance to that which I have just described. The mineral hills themselves are grassy, not wooded, steep, and comparatively free from loose rock on the surface. The Gregory lodes are lower down on the mountain than the Alta, and the mine is more easily accessible. The camp is a small one, containing only an office, boarding-house, ore-houses and a few cabins, all of logs, and an old smelter no longer in use. The Gregory Consolidated mine, upon which more work has been done than on any other in the camp, is covered by a United States patent, and has been owned for several years by J. & W. Seligman, of New York. This firm established a branch banking house in Helena several years ago, which, through the mismanagement of their agent, did not turn out to be a profitable enterprise. The Gregory Consolidated mine came into their possession through their branch house. The property is now in charge of Mr. L. R. Nettre, of New York; but, owing to the loss by fire, last spring, of its hoisting and pumping works, the mine is filled up with water, and no ore is being taken out. I suspect that the obstacles to successful silver mining to which I have several times referred—the inability to sell the ores with profit here or to realize any thing on those shipped to the States—have rather discouraged the Messrs. Seligman, and that they have concluded to spend no more money upon their mine until there is a market for their product. The Alta Montana mill, if it is successful, will probably make such a market.

"The shaft of the Gregory Consolidated mine has been sunk to a depth of 425 feet, with levels branching out from it at five stations, and opening up about 1300 feet of ground. From the surface to the 200-foot level, the vein is from 5 to 6 feet wide, and from there to the bottom of the shaft from 6 to 13 feet thick. The ore is argentiferous galena containing iron and copper pyrites and a small percentage of zinc. Three thousand tons of it have been taken from the mine and shipped out of the territory for reduction, most of it to E. Balbach & Son, Newark, N. J., and it has averaged to produce $100 worth of silver and $6 worth of gold to the ton, besides 60 per cent of the whole weight of the ore in lead. The statistics of this mine I have given as furnished me by the superintendent, as I could not go into the mine on account of the water. In selecting ore for shipment, there have been left upon the dump about 5000 tons, which, assays show, contain to the ton $40 worth of silver, $10 worth of gold, and 30 per cent of lead, which, when they can be reduced at reasonable expense, will net their owners a large sum of money.

"The Gregory mine is on the same lead with the Gregory Consolidated, and covers, as the latter does, 800 feet of the vein. This is owned by Colonel W. F. Saunders and W. C. Child, of Helena, George B. Archer, of New York, and L. R. Nettre, the superintendent. This is comparatively a new mine, having been opened only about three months. The shaft is 112 feet deep, and there are two levels 62 feet apart with drifts opening up the vein for a distance of about 400 feet. There is also a tunnel 525 feet long, connecting this mine with the Gregory Consolidated. This lead is a true fissure-vein, with well-defined wall-rocks, its general direction being north 34° 35′ east, and its dip 75° from the perpendicular. The ore is similar in character to that which I have described as having been found in the adjoining mine. The mineral in place in the vein looks very solid and rich, and the mine can be made to produce very largely with a little more development.

"Across the divide which separates the Prickly Pear from the Boulder Creek, and about 4½ miles from Wickes, is a group of mines, of which the Rumley and Comet are the most important. The lower tunnels of both of these mines pierce the mountain side by side not far above the gulch, but work is now suspended on both, and as the Comet was locked up at the time of my visit, I was unable to see it. The Rumley, which is owned in Philadelphia and Montana, was discovered nearly ten years ago, but the work upon it was of a very desultory character until 1876. During the years 1876 and 1877, development was pushed forward very vigorously, and 3500 tons of good ore were taken out. Of this, 1000 tons were selected and shipped to Newark, N. J. and Freiberg, which averaged to produce 130 ounces of silver (worth about $145), $8 worth of gold and from 30 to 40 per cent of lead. The expenses of mining, selecting, shipping, and treating were so great that there was no profit in operating the mine unless there was a market for the lower-grade ores, as there was not; and so work was suspended about two years ago. The 2500 tons of ore now on the company's dumps are mostly second-class, carrying from 50 to 100 ounces of silver. The Comet mine has also a pile of similar ore on its dumps, which looked to me larger than that of the Rumley.

"This mine (and the Comet, I am told, is similar to it) shows larger bodies of galena ore than either of those I have described in this letter. The direction of the vein is northeast and southwest, its dip 10° to the north from a perpendicular, and its wall-rock granite. The average width of the ore in the vein is from 5 to 6 feet. I went into the lower tunnel of this mine, but was unable to examine it very carefully on account of the mud and water. This tunnel is 700 feet long, and runs 90 feet on 50-ounce ore. A shaft 145 feet deep connects this tunnel with the surface, and, a part of the way, shows a body of ore 12 feet thick. Another shaft, 220 feet east of the first, has been sunk 190 feet, and contains ore from 5 to 6 feet wide. The discovery shaft, 200 feet from the last, is down 94 feet in the vein, also 5 or 6 feet wide. There are two strata of ore in the vein 30 feet apart, which are believed to join at some unknown depth.

"A mile or two east of the Rumley and Comet mines, is another group in the Boulder District not as much developed as those I have described; and to this I paid a brief visit. No work is now being done on any of these; and I was able, therefore, to give them only a superficial examination. The best-known mine in this group is the Australia, owned by Montana gentlemen. The only development that has been made on it is the sinking of one shaft 70 feet deep, the bottom of which shows a vein of solid ore 5 feet 8 inches wide, in which there is no waste. A little first-class ore has been shipped from this mine which produced 120 ounces of silver to a ton. The second-class ore which is now lying near the top of the shaft assays 61 ounces to a ton. This mine is certainly a very promising one, but is probably no better than several others in its immediate neighborhood.

"I have not visited the Ten-Mile or Red Mountain District, situated about twenty miles southwest of Helena, as no mining is being prosecuted there. I am told by disinterested persons that the veins of galena ore are larger and richer there than in either of the districts I have visited, but work is suspended for the reason I have so often assigned for the idleness of other mines—the want of a market for the ores. Timber is plenty near all of these mines, and wood is cheap.

CONCLUSIONS.

"My conclusions in regard to the silver mining enterprises within thirty miles of Helena are as follows:

"1. There is a great number of mines already developed which are capable of producing an enormous quantity of silver-lead ore, and there is every reason to believe that many other lodes will be discovered and opened as soon as there is a market for their ore.

"2. The districts I have visited have almost ceased producing, because attempts to reduce their ores in Montana have heretofore failed, and the expenses of sending them East have been so great as to leave little or no profit for the miners.

"3. The galena ores of these districts are not less rich or less easily mined and are no more difficult to treat than the ores in some of the districts of Colorado and Utah, where mining has been made very profitable. There is, therefore, every reason to suppose that whenever capital can be induced to take hold of some of these mines, proper machinery is provided for treating the ores, and expert skill is employed, the mines I have described, and many others in the same districts, will yield large returns to their owners.

"4. If the Alta Montana Company's enterprise is successful, other capitalists will probably be induced to invest in similar works.

"5. In any event, the completion of the Utah & Northern Railroad will make these mining districts more accessible than they have ever been before, will reduce the cost of all machinery by furnishing cheaper freights, and will probably make it easier to interest capitalists in all kinds of Montana enterprises which offer large returns for legitimate business investments.

"Nothing which I have said in this letter applies to the mines in Butte City, Phillipsburg, or Glendale, the points in the territory where mining is now being prosecuted with the most vigor, and which I shall visit after leaving Helena."

PROGRESS IN SCIENCE AND THE ARTS.

General Science.

The Supposed Compound Nature of the Elements was the theme of a brief paper by Mr. J. Norman Lockyer, before the late British Association meeting, in which he presented some further spectroscopic researches in that direction. He observed that when carefully-distilled metallic sodium was condensed in a capillary tube, placed in a retort, and heated in a Sprengel vacuum, it gave off 20 times its volume of hydrogen. Phosphorus, carefully dried, and submitted to the same treatment, gave off 70 volumes of a gas which appeared to consist chiefly of hydrogen. Although it gave some of the lines of phosphorus, it was not phosphoreted hydrogen, as it gave no action with solution of cupric sulphate. A specimen of magnesium, carefully purified, gave a magnificent series of colored phenomena. The hydrogen line first appeared, then the D line, characteristic of sodium (but not the sodium spectrum in this case, as the green line was absent), and, lastly, the green line of magnesium; and then, as the temperature gradually increased, mixtures of all three lines appeared, with the blue line, the D line being always the most prominent. In this experiment only two volumes of hydrogen were collected. Neither gallium nor arsenic afforded any gas. From sulphur and some of its compounds, sulphurous anhydride was always obtained. From iridium, hydrogen was given off *in vacuo* before heating; while from lithium, no less than 100 volumes of hydrogen were disengaged. The conditions of these experiments were all uniform. We refer our readers to the *Chemical News* for the accuracy of our extract. The author does not attempt to generalize from his results, as, indeed, it would be exceedingly hazardous to do so.

Comparative Energy of Explosives.—We give below, on the authority of the *Scientific American*, a table, purporting to be from a report of "the United States Board of Army Engineers" (whatever official body that may be), presenting the results of two years' thorough trial of the relative efficiency of various modern explosives. Ordinary dynamite is taken as the standard of comparison, namely:

Dynamite No. 1	100	Vulcan powder	82
Gun-cotton	87	Mica powder	83
Dualine	111	Nitro-Glycerine	81
Rend-rock	94	Hercules Powder No. 1	106
Dynamite No. 2	83	" " No. 2	83

Concerning the above, it may be useful to note that dynamite is made by combining nitro-glycerine with an inert powder having great absorbent capacity—siliceous earth (kieselguhr) being generally employed for that purpose by its inventor, Nobel. Rend-rock (lithofracteur), so far as we have able to learn, is made by mingling gunpowder with nitro-glycerine. Dualine is a compound consisting of cellulose (wood-fiber), nitro-cellulose (gun-cotton), nitro-starch, nitro-mannite, and nitro-glycerine, mixed in different proportions, according to the strength which it is desired the powder should possess. Mica powder is nitro-glycerine mingled with a non-absorbent material—mica scales are used by the inventor, Mr. Mowbray. Gun-cotton is well known to our readers. Concerning Vulcan and Hercules powders, we have no reliable references as to composition; they are, however in all probability, nitro-glycerine mixtures.

We have gone into the above details, because of the figures of the table, which quite overturn our preconceived notion that nitro-glycerine, pure and simple, when properly exploded, was the most powerful and rapidly-working of all known explosive agents.

It would be interesting to have a record of the experimental trials of the board on whose authority the table is given, in order to know something of the nature of their comparative tests, and that our contemporary does not give. In the absence of such information, we can only express our mild surprise that mixtures of inert substances, or of comparatively sluggish explosives, with nitro-glycerine—itself the very embodiment of "portable force"—should be pronounced authoritatively to be capable of yielding a greater explosive energy than the "pure and unadulterated juice of the grape," so to speak.

Chemistry and Technology.

American Jute.—The Secretary of the New Jersey Bureau of Statistics recommends to the farmers of that State the cultivation of the common arbutilon (*Arbutilon avicennæ*) as a useful fiber plant. It has long been known as an ineradicable nuisance to the farmers of the Middle States, and its promotion to the list of useful plants is worthy of notice. Mr. Samuel C. Brown, the Secretary of the Bureau, says of it: "The quality of this domestic jute for a diversity of purposes is established beyond question. Hitherto, gunny cloths, cordage, and other coarse products have absorbed most of the jute manufactured in India, England, and in this country; but M. Lafranc, who is an expert in fibers, thinks we shall be able to turn jute to other and more profitable uses, in combination with wool, cotton, silk, etc. * * The range of uses to which jute, in its various forms, can be utilized under a cheap system of production, is without limit, so that instead of consuming for domestic purposes, as we now do, about $5,000,000 per annum of raw and manufactured jute, the quantity could be increased many fold and our manufacturing and agricultural interests be vastly augmented thereby." For full details of this subject we refer our readers to the *Scientific American* of September 27th.

Of the Two Evils—Paris green and the potato-bug—Prof. Grote, at the recent meeting of the Entomological Club, at Saratoga, expressed the opinion that the former was the greater. He has studied carefully the effects of Paris green, agriculturally employed, and has found cases of the poisoning, by this agent, of horses, cattle, sheep, poultry, and even of human beings.

Engineering.

Interoceanic Transit.—Several special meetings of the "American Society of Civil Engineers" have just been held to discuss the interesting subject of the Interoceanic Canal. Our contemporary, *Engineering News*, gives a full report of the proceedings of these meetings, from which we take the liberty of condensing the following notes.

Señor Francisco de Garay, a delegate to the now famous Paris Conference, who was invited to present his views, gave, in most decided terms, his opinion that the decision of the Conference was obtained by good management, and upon a prearranged programme. His criticisms of the Wyse project showed its utter unfitness, and the ignorance of its advocates at the Conference.

At the adjourned meeting, held several days after, Mr. F. M. Kelley, whose services in behalf of the Interoceanic Canal are well known to our engineering readers, gave an account, illustrated by fine maps, of the surveys made by his direction. Mr. Kelley favors the San Blas route. Major Shelbourne, after pointing out the difficulties to be encountered in the construction of a canal by the Nicaragua and Tehuantepec routes, expressed the opinion that the San Blas route, without locks, was the shortest, best, cheapest, and most feasible of them all.

Our contemporary expresses gratification, in which we participate, that the subject is attracting the earnest attention of our best engineers.

The Isthmian Canal.—Mr. Sidney F. Shelbourne sums up the case for the San Blas route, for which we shall not cease to contend, in the following very decided terms: "At San Blas we have the only perfect location for a sea-level canal. Entirely free from flooding rivers, the excavation would be in almost a direct line from sea to sea. It is less than one sixth the length of the Nicaragua route, and the actual cutting, including the tunnel, only 24½ miles. While it is admitted by the advocates of the Nicaragua scheme that it will require a million and a half to two millions of dollars per year to operate and maintain a canal by that route, the San Blas route would only demand one tenth of that sum, and thus afford over the Nicaragua route an important factor in the question of dividends." For Mr. Shelbourne's letter in full on this topic, our readers are referred to *Engineering News* of October 4th.

The Construction of the Interoceanic Railroad across the Isthmus of Tehuantepec, to which we have already referred in the Journal, is said to have already begun. This enterprise is intended as a rival to the Panama Railroad, and is based upon the authority of a concession from the Mexican government to Mr. Edward Larned, of Pittsfield, Mass.

The Construction of the Hudson River Tunnel, which, from the period of its first projection up to the present, has been hampered with litigation, has lately been resumed, the *casus belli* having been removed by the agreement of the tunnel company to pay to the D., L. & W. Railroad Company a certain sum for the right of way. It is anticipated that the work will be completed within three years.

The Mileage of New Railroad built in the United States during the first nine months of the current year is given, on authority of the *Railroad Gazette*, as 2214 miles, as compared with 1267 miles for the corresponding period of 1878, 1396 in 1877, and 1677 in 1876. At this rate, the mileage of new road at the close of the year will figure up to 2767 miles.

ON THE USE OF COMPRESSED PEAT IN BLAST-FURNACES.*

By A. Enigl.

The rapid increase that has taken place during the last ten years in the production of pig-iron in the Austrian Alpine districts, and more particularly in the furnaces of Vordernberg, has been attended with constantly-increasing difficulties in the supply of charcoal; the woods attached to the works being unable to supply the necessary quantity, and at the same time to provide for the future.† At various times, the use, as substitutes, of coke, lignite, and peat has been proposed, either alone or in admixture with charcoal. The first of these is unsuitable, partly from the small blowing-power of most of the works, and partly from the deterioration of the metal, owing to the large amount of sulphur present in the coke. The use of lignite was tried in the furnaces of the neighboring Voitschberg District; but all the experiments failed, owing to a fatal defect of the material, that of decrepitating into minute fragments when raised to a high temperature. Peat of an exceptionally good quality, containing only from 1·7 to 4 per cent of ash in the air-dried state, and practically free from sulphur and phosphorus, being obtainable in large quantities in the Wörschach peat moors in the Upper Enns Valley, about 70 miles distant, it was determined to erect an experimental factory for the purpose of compressing it into masses sufficiently close to bear transport. The process selected was that of Hermann Eichhorn, used at Failenbach, in Bavaria, and producing so-called ball-peat. The raw material, pulped by passing through a horizontal pug-mill, armed with spiral knives of a peculiar form, is forced through a circular aperture in a die-plate, forming a continuous cylinder of 8 centimeters (3·15 inches) in diameter, which is cut into pieces of the same length by a rotating knife. These pieces are delivered into a nearly horizontal conical wooden drum, about 9 feet long, turning slowly about its axis, in which the cylindrical pieces, by rubbing against each other, are reduced to a nearly spherical form. These, when discharged from the drum, are lifted by an elevator to the top of the drying-house, whence they roll down to the various shelves on which they are exposed to the air without further handling. When dried, the material is ready for use, and is sufficiently compact to bear transport with but very little loss from breakage. The blast-furnace assigned for the experiments was a small one about 30 feet high and 560 cubic feet capacity, which was chosen as being more convenient, and likely to show changes in the method of working by alterations in the charges more rapidly than a larger one; other advantages being found in its powerful blowing-engine and capacious heating stoves. The charges, under ordinary conditions, pass through the furnace in from two and a half to three hours, the daily production of white forge pig being 12 to 13 tons. The experiments, extending over several months, were conducted in two principal series. In the first, the charge of pine-wood charcoal was kept constant, peat being added in the proportion of 12, 25, and 50 per cent by weight; while in the second, the charcoal was diminished as the peat increased, until a maximum of equal volumes of each was reached, corresponding to ⅓ of the former to ⅔ of the latter, by weight, the density of compressed peat being about double that of charcoal.

By comparing the iron made with the fuel consumed, it was computed that, by volume, 1 cubic meter of charcoal could be replaced by 1·54

*Abstract of a paper in the *Zeitschrift des berg- und hüttenmännischen Vereines für Steiermark und Kärnten*, vol. xi. p. 41. From the Proceedings of the Institution of Civil Engineers of London, edited by James Forrest, Secretary.

† In 1872, part of the charcoal used in the furnaces at Eisenerz was brought in sacks from long distances by railway; some, as the writer was informed, coming from the lower Danubian provinces.

cubic meters of peat; or, by weight, that 100 kilograms of the former were equivalent to 305 kilograms of the latter. These figures include the waste, in carriage, on the peat from the works to the furnace, amounting to about 3½ per cent. Neither the quality of the iron nor the working of the furnace was in any way changed, except that the gases, though of greater heating power, contained a large amount of condensable products, which were deposited to a great extent in the gas-flues, rendering a more frequent cleaning of the latter necessary than when charcoal is used alone. To obviate this, the use of a Lundin condenser is suggested by the author.

Subsequently, a process of carbonizing the peat by superheated steam, according to Barff and Thursfield's method, was tried to some extent. The product weighed about twice as much as an equal volume of soft-wood charcoal, or 28 kilograms as against 14 kilograms per hectoliter. From 50 to 66 per cent, by weight, of this substance was added to the charge of charcoal without in any way affecting the working of the furnace. As it is, however, somewhat less combustible than soft charcoal, approaching in this respect more nearly to beech and other hard-wood charcoals, it is specially suited for the production of gray foundry iron, where a higher temperature is required. The average yield of peat when carbonized is about 45 per cent by weight; but as analyses show that it contains only 31 per cent of carbon, a large proportion of volatile inflammable matter must be retained. The waste gas flame in these experiments was very hot, and the admission-passages of the burners in the hot-blast stoves and calcining kilns had to be contracted by about one half.

A comparison of the calorific equivalents of air-dried and carbonized peat showed that 100 kilograms of soft-wood charcoal were equivalent to 280 kilograms of peat or 109 kilograms of peat coal; so that 100 kilograms of air-dried were represented by 39 kilograms of carbonized peat. By the use of the latter, the cost of carriage was reduced nearly two thirds.

TRADES-UNIONISM IN INDIA.

I believe that among no people on the face of the earth does combination exist so universally and in such strength as it exists among the races which inhabit Hindostan. The peculiar social system known as caste is a huge system of extraordinarily powerful combinations. Caste is often spoken of in this country as though it were an exclusively religious phase of Hindooism. Even if it were so, it would still be evidence of strong combination, because the system which enables each section of the community, though of the same race and the same religion as the other sections of the same community, to maintain customs different from theirs, to regulate social intercourse in the minutest details, and to so far disregard passion and its impulses as to successfully prohibit marriages out of its own section, shows (from whatever causes) a unity of purpose and an obedience to some influence compared with which the power exerted by the best-organized trades-union in England is as nothing. The combination that exists in India, however, is not one which affects exclusively folk and faith, kinship and worship. As recommended by Menoo, professions and trades have become hereditary; and thus, also, castes have been formed. There are, therefore, trade castes, profession castes, and calling castes. Take, as an instance, the coppersmith caste. I do not propose to discuss here the peculiar habits and customs of this caste. That is foreign to my subject; but it is relevant to point out that, by the powerful combination which exists among the coppersmiths, they are able to command a higher price for their commodities than they could obtain without such reliance on their customs. They are able to do more than this; they are able to do what an English trades-union seldom, if ever, accomplishes—they are able to get a higher price for their commodities than they could obtain in what is called a free market. Any one who has been in the habit of making purchases in the coppersmiths' bazars in Bombay, Benares, or other Indian city, knows very well that the traders are able to maintain two prices for the same article—one which they ask and receive from the poorly-paid native; another, a higher price, which they demand from the well-paid European. This plan is not adopted and pursued surreptitiously. It is openly acknowledged, confessed, and defended with a charming *naïveté*. It is true that some Europeans, long residents in India, are, by a patronizing *nonchalance*, able to persuade the coppersmith to sell to them and their friends at native prices. But such transactions are regarded on both sides as favors, and not infrequently some additional consideration other than money is expected from the buyer by the salesman. Sometimes, too, there are what trades-unionists would call black sheep, who will sell secretly to Europeans at native prices in order to force a sale. But the instances are comparatively rare, and do not affect any general observation. The essential principle of a caste may often be deviated from, both in trade and religion (as the essential principles of Christianity and fair-dealing are often neglected in this country); but the fact that the system I have mentioned is the fiction or tradition of the caste, establishes, rather than otherwise, what I have written.—*The Fortnightly Review.*

GENERAL MINING NEWS.

ARIZONA.

THE TIGER MINE.—The Phœnix *Herald* of September 20th says of this mine: "A shaft has been sunk to a depth of 350 feet, and a station nearly completed at that point. The level is progressing finely, and, it is confidently expected, will reach the vein at a depth of 400 feet, and inside of sixty days, provided no obstacle other than lack of water is encountered. It is anticipated that present disadvantages, arising from lack of water, will wholly disappear when the vein is struck, as water-seams are cut daily in the strata, which, when combined, will give all the water required. The daily output of ore averages twelve tons, with a value per ton of $150. There are on the dump about 2000 tons of ore, sufficient to keep the present force of 40 men employed for the next four months."

THE CHROMO MINE.—Regarding the recent reported strike in this mine, the *Silver Belt* of the 19th ult. says: "A tunnel was run in a distance of 108 feet, where it entered a vein of low-grade ore, which proved to be 20 feet in width. A vein of 3 feet was passed at a distance of 80 feet from the 20-foot ledge. The tunnel was driven 160 feet farther, when the strike was made.

"At this point, the vein was entered and penetrated 40 feet, within which distance the greatest width of continuous quartz is 10 feet, and for the balance of the distance quartz appears with about the same regularity as stripes on a zebra, and in no instance over 2 feet apart. The quartz largely predominates. The 430 feet of tunnel cost $15,000. The dump at the mouth of the incline throughout showed choice ore, and all was 'away up' ore. The width here shows about 40 feet, and also indicates a uniformity of breadth between the points named on the ledge, if not throughout. The Chromo is unmistakably on what is known as the Stonewall Jackson Ledge, and is distinctly marked upon the surface for a distance of 14 miles."

We are indebted to the Prescott *Miner* of September 26th for the following items:

"At Smithville, the new town on Cherry Creek, work on some 30 or 40 mines is being pushed, and ore is accumulating on the dumps of these claims.

"In Big Bug District, things are quite hopeful. A lode carrying horn-silver, named the Chicago, has been discovered.

"A Chicago company has concluded to take 10 mines in the Big Bug District, which it bonded some weeks since.

"The Arizona Central Mining Company, at Seymour, has struck rich ore in the old Vulture, and the mill is paying largely.

"The Peck mill is yielding bullion regularly. Rich ore has been found on the north extension of the Peck mine, which, it is thought, will prove equally rich with the original discovery.

"The Black Warrior and Prince mines are turning out good ore, and have been inspected by New York experts, with a view to purchasing.

"At the Tip Top, a rich chimney of ore has recently been struck and the production of bullion is on the increase.

"On the Savage, at the head of Crook Cañon, a force of men is at work, and at a depth of 70 feet a four-foot vein carrying high-grade ore has been struck.

"On the Davis, the New York Mining Company has men at work.

"Reports from Groom Creek are that new ledges of pay ore are being daily uncovered. Water exists here in the greatest abundance, and there is a heavy growth of pine timber on all the hills. Arrastras are being run on gold ore from the Golden Chariot and other mines.

"A recent clean-up gave an average of seventy-five dollars to the ton of ore, and there is now on the dump a large quantity awaiting reduction. The Golden Chariot clean-up averaged ninety dollars gold to the ton. Much of the ore worked for gold in this camp is very rich in silver, which is, of course, not saved to any appreciable extent in the gold process. Assays of several ledges indicate three hundred dollars as about the average silver value of the ores, and we understand that arrangements are being made by a firm here to ship this ore to San Francisco for reduction. It is estimated that fifty dollars per ton will cover the freight charges to that city. It is to be regretted that there is no mill here to work the ores of Lynx, Groom, and Hassayampa districts."

CALIFORNIA.

THE BODIE DISTRICT.

We take the following from the *Standard* of September 27th:

BLACK HAWK.—This mine is on the northeastern brow of Bodie Bluff proper. The shaft is down 373 feet, a progress of 11 feet the past week. A little water is encountered, which is easily handled. The Liberty winze, 220-foot level, is down 53 feet, a progress of 5 feet during the week. The vein is 22 feet wide, the ore being of $15 or $20 quality. The drift at the bottom of the winze from the 220-foot level is 16 feet in length; progress, 6 feet. The east cross-cut, 320-foot level, is in 188 feet, in a hard formation—a progress of 6 feet. No working capital has been sold by this company; all the funds for the operations have been provided from assessments, of which there were six levied and collected, amounting, in all, to $1.75 per share. As there are 50,000 shares in the mine, this would rapresent a total of $87,500 thus far provided from this source.

STANDARD.—From the official letter of this mine, dated September 28th, we make the following extracts:

"The north drift, 385-foot level, is now in a distance of 395 feet from the main east cross-cut. There has been a very marked improvement in this drift during the past week. About 100 feet back from the present face of the drift, the ledge branched into two seams about three feet wide each. These two seams have now come together, forming a ledge seven feet wide, of very good ore. The west cross-cut from this drift is in 52 feet, and, since last report, has cut through a ledge three feet wide of fine-looking quartz. The south drift, from the main east cross-cut, is in 42 feet; the ledge is 5 feet wide, and is looking well. The south drift, 550-foot level, is in 118 feet from the winze, showing a ledge 6 feet wide of good ore. The west cross-cut, 300-foot level, is in 94 feet. There is no change to note in the formation since last report. In the 'West Standard' stopes, the ledge is ten feet wide, of usual rich ore. The ledge in the stopes, 550-foot level, is eight feet wide, of good milling ore."

UNIVERSITY.—This company started up its new hoisting-works on the 1st inst. This company has one of the finest outfits in Bodie. The shaft is now down 107 feet, and will be continued straight down a depth of 500 feet before running a level.

TIOGA.—The main shaft of this mine has reached a depth of 619 feet, the bottom being in hard blasting ground. The Syndicate drift (north), 520-foot level, to connect with main Syndicate tunnel, is in 439 feet, the face being vein matter, carrying occasional seams of quartz. The south lateral drift on vein No. 3, same level, is in 116 feet. The face of the drift is in very fine ore. The north drift on the same vein is in 100 feet. No particular change since last report. The vertical winze is down 72 feet, and will be continued to 1000 feet before cross-cutting for the vein. An upraise has been started on vein No. 3, which is in excellent ore.

FATAL MINING ACCIDENT.—A dispatch from Bodie, dated San Francisco, October 4th, says that, as the 6 o'clock shaft, last night, was being lowered in the Tioga mine, with nine men on board, the engine escaped the control of the engineer, and they fell to the 500-foot level. One man is now dead, and all are injured in such a manner as to warrant the belief that they will not recover.

THE DERBEC GRAVEL MINE.—The Nevada *Transcript* of September 27th says: "While the miners working in this mine were pushing the east drift ahead, a seam of gravel was developed where the gravel yielded several hundred dollars to the pan, and that between $15,000 and $30,000 was extracted within the distance of a few feet. Some of the chunks of gold are reported to weigh an ounce each. It was from this same drift that $43,000 was taken some time ago. This seam extends southeast through the Marlow, Bishop, Block, and Haney mines, all of which are situated within a mile of the Derbec. Six years ago, the Bishop produced $6000 in a distance of thirty feet; the Block, $11,000 in fifteen or twenty feet; and the Haney, $1400 in seven or eight feet.

"The Miners' Union of Nevada has dissolved. A proposition to fix the rate of underground miners' wages at $3 per day was the cause. That is the going rate of wages in the quartz mines of that district, and while a portion of the union was in favor of declaring in the by-laws that such should be the rate, others opposed establishing a rate, as it looked like dictation to the mining companies."

COLORADO.

ROBERT E. LEE MINE.—The ore now produced by this mine is remarkable for richness. The Leadville *Reveille* of the 3d inst. says of this mine, which is on Fryer Hill:

"In ten days, the Robert E. Lee mine has delivered to the sampling works of Eddy & James separate and distinct lots, which have been paid for at assay value as follows:

1,412	ounces per ton.	2,958	ounces per ton.
1,516	" " "	2,825	" " "
2,878	" " "	5,405	" " "
882	" " "	10,306	" " "
520	" " "	3,014	" " "
708	" " "	767	" " "
1,098	" " "		

"These lots, as above given, represent a value of one hundred thousand dollars delivered in ten days, but there are also lots of lower grade (none of them being under one hundred ounces to the ton) received during the same period, aggregating twenty-five thousand dollars, or a total of one hundred and twenty-five thousand dollars.

"One half of this mine was sold on the fifth day of August last, for a less sum than its output for the ten days specified.

"It is almost incredible to believe that one span of horses can draw a load of ore from the dump of a mine to market, and its owners receive from $15,000 to $30,000 therefor; yet such can be done by sorting the ore of the Robert E. Lee mine. The ore carries 87 per cent of silver and 13 per cent of sulphur. It has the appearance of metallic lead, and can be readily cut with a knife.

"This mine has produced to date, since August 1st, over $300,000. At present, a whim is used for mining, though the company has a new twenty horse-power engine in position and will be ready to run in a few days. The owners of the property are very reticent in giving information, and scarcely any one can gain admission to the mine; but the above facts are entirely reliable."

The Little Pittsburg.—We are in receipt of the following official letter from this mine under date of September 28th:

"In breast of No. 2 drift, west, we have four feet solid galena and four feet sand carbonate ore, which averages three hundred and fifty ounces silver and sixty per cent lead to the ton. In breast of drift south from shaft No. 4, we have ten feet of similar ore. Have struck iron ore in Dives shaft; indications good. Engine in place at discovery shaft; will have pump working Monday. Remitted from this week's product over $75,000."

This company was paid by Grant's smelting establishment $221,000 for ore delivered in September.

GEORGIA.

The Harris Mine.—We make the following extracts from a letter written by Dr. M. F. Stephenson, and published in the Gainesville *Eagle* of October 3d, 1879:

"This mine is located five miles northeast of Gainesville, in Hall County, and is the only silver mine now being developed in Georgia. It was formerly called the Lowman mine, and was worked for 25 years for free gold. The vein is from three to ten feet in width, and has been superficially tested at various points for half a mile, the deepest shaft being one hundred feet. The ore is argentiferous galena, with alternating lodes of sulphuret of iron, yielding very well. The property has been purchased recently by Gen. Finney and Col. Sanderson, of Pennsylvania, and put under the superintendence of J. J. Hayden. Accompanying this and parallel with it, on adjoining lands, are two other veins of gold, with a single lode in each, of argentiferous galena. The superintendent is now engaged in testing the Harrington vein, north of and in near proximity to the Air-Line Railroad. It is seven miles north-east from Gainesville, and was worked years ago, at different points, in the crudest manner. The main lead is a quartz vein from two to four feet thick, with a large percentage of sulphuret of iron, with gold. In some specimens we find quantities of the sulphurets highly crystallized. This vein extends southwest for over two miles, including the Merck property, which has been fairly developed, yielding from $20 to $30 per ton; and, at one point, sixty feet deep, the assays ranged high, with silver largely predominating. The mill, of five stamps, is kept running about four days in the week, by the labor of four hands and a machinist, and one team, at $7, yielding an average of $40 per day."

IDAHO.

Idaho Snake River Gold Mining Company.—The *Idaho Enterprise* of October 2d says of this company's operations: "This company owns the Black Cañon mines, comprising eighty acres of mining lands, and said to be among the richest claims on Snake River. The contracts for the ditching have been signed, and the mining machinery is being made East and in Ogden. This company has a process for working the mines and saving the gold which is said to give very good results. The company is substantial, and is going to work under an organized system."

General Custer Mine.—The Yankee Fork *Herald* of the 25th ult. says of this mine: "Two years ago, two thirds of this mine were bonded for $60,000. The mine is three hundred miles from a railroad, no wagon road and hardly a trail over the mountains, and in a wild country, surrounded by hostile Indians. The remaining third of this mine was sold to Col. Hyde, upon the report of Louis Janin, M.E., for nearly $100,000. The first work done upon the mine was an open cut, about 25 by 50 feet and 25 feet deep. From this cut 100 tons were shipped to Salt Lake and sold there. The ore averaged about $700 per ton, and after all expenses were paid, netted $60,000; besides this, there are nearly 1300 tons on the dump which will probably average—the first 500 tons $225 and the remaining 800 tons, $160. About 160 feet below this cut, a tunnel was started and is now in 25 feet, being driven on the vein all the way, the width of the vein being unknown and the quality of high grade. A peculiarity never before noted is the fact of the vein itself being the croppings; that is, pay-ore lying on top of the ground, the hanging-wall having fallen off or slid down the hill, leaving the vein exposed for 600 feet; thousands of dollars worth of work having been done by nature. The tunnel will tap the vein at the depth of 700 feet, and will probably have to run only 300 feet to do so, and by advancing to 600 feet the vein will be cut 1000 feet below the crest of the mountain. It is proposed to prospect the mine through this tunnel. When this tunnel has been advanced 300 feet, there will be plenty of ore above to run a 40-stamp mill for several years, and the ore can be easily stoped out, run through chutes into the lower or Pfeiffer tunnel, by car to the dump, and thence on a tramway into the mill.

"A shed is building, and a track laid from the mouth of the tunnel to the ore-dump. From this dump there is a gradual incline to the company's mill-site, 2000 feet below, on the Yankee Fork. Higher up on the mountain is a shaft about ten feet down, from the bottom of which the handsomest specimens were secured that have ever been encountered in the mine. The vein covers the shaft, and assays over $600."

NEVADA.

THE SUTRO TUNNEL.

Three new prospecting drifts have been started from the Sutro Tunnel, and are, with that between the Occidental ledge and Star lode, being driven ahead by regular shifts. The latter drift is now in 70 feet and in country rock.

The first of these new drifts starts north near the east wall of the Star lode, and is being run in the ledge. The vein of this lode, where cut by the Sutro Tunnel, is 100 feet wide and contains low-grade quartz. The drift just started has already encountered ore assaying $34 per ton.

The next drift is running south, just inside the foot-wall of the Star lode, and also found fine ledge matter.

An important connection with the tunnel will be made, within the current month, with the Mount Hood and Vancouver workings from the Mint shaft. There remains now, between the north lateral branch of the Sutro Tunnel and these workings, about 170 feet, and work is being done from both ends. They will doubtless meet before the 1st of November; for the mines average about 25 feet per week and the tunnel double that, although the heat there is excessive. The connection will doubtless give the Mine shaft a down-cast. The air there is cool, and can be carried on north with the tunnel and through it to all the mines of the north end. The air-pipes have been placed to the face of the south lateral drift of the tunnel; and the blowers which stand in the Chollar-Norcross-Savage shaft connection started up; but as that connection has been bulk-headed to keep the hot air out of the shaft, there is not cool air enough sent in to sustain the workmen, and nothing is going on in the face.

Following is the report of progress in the north lateral branch for the week ending September 22d, 1879, the header being 8 × 10 feet:

Number of feet driven at last report	427
Number of feet driven since	47
Total number of feet in branch	474

Water—Temperature at mouth, 114°.
Air—Temperature at mouth, 78°; at Shaft No. 1, 90°; at Shaft No. 2, E., 78°; W., 67°; at header, 94°.
Rock—Temperature in drill-hole, 103°.

Holes drilled, 146; holes blasted, 151; aggregate depth, 1168 feet; average depth, 8 feet; powder consumed, 514 lbs.; exploders consumed, 151; drills sharpened, 481; rock extracted, car-loads (two tons), 360.

The assessed value of the Sutro Tunnel Company's property has been increased from $100,990 to $104,490.

THE COMSTOCK.

We condense, from the Gold Hill *News* of October 1st, as under:

The Sierra Nevada water is now being taken from the incline as fast as three donkey pumps can raise it and send it through to the C. & C. shaft. This will be continued until the 2300 level of that mine, the 2400 of the Union, is drained, which will be three or four days. A drift will then be started south on that level, passing under the Union shaft, and following the course of the diamond drill where ore is known to exist. The Union shaft is being sunk as rapidly as possible to connect with this drift. The situation is intensified by the fact of the encountering of ore in the Union shaft below the Sierra Nevada 2200, and some 40 or 50 feet above where it was expected that ore would be found. This ore is of good quality, and the bottom of the shaft continues in ore giving good assays.

Passing a little further south, and the joint Ophir-Mexican winze from the 2100 level attracts attention because of the similarity of the formation encountered there to that in the Ophir incline, where the first stringers of quartz pitching west were found. As soon as 35 feet can be made in the bottom of this winze and in the raise from the 2300 level, another interesting cross-cut, joint with Ophir and Mexican, will be started west on the 2300 level, second in importance only to that recently started on the 2400 of the Ophir. This latter cross-cut has not yet passed the incline and penetrated far enough to enter fairly upon its interesting and important journey.

There is a growing interest in the Divide mines. Exchequer has commenced cross-cutting west on the 2400 level and intends to open up and explore that level thoroughly from wall to wall of the vein. Consolidated Imperial is starting toward the foot-wall on the 2600 also, as well as preparing to more thoroughly prospect that portion of the vein lying to the east of the main lateral drift. Preparations to go on to the 2800 level have also been made.

Silver Hill is looking better on the 1300 level, but has a few feet yet to go before reaching the most interesting portion of the vein.

The Union Shaft.—Specimens of ore recently taken from this shaft show free gold in various directions; black sulphurets prevail in places, and the ore shows considerable base, principally lead. In fact, it resembles that found in the Ophir croppings in early days. It is hard work to tell the difference in some of the specimens. Of course, these samples are rich, and reports say that the shaft is showing better as work progresses. Two hundred and fifty-nine men are at work on this shaft, and the rate of progress is upward of 40 feet per week. A depth of nearly 2300 feet is now attained

CHERRY CREEK MINES.

The Eureka *Sentinel* says of these mines:

"The Star Mining Company, located in this district, still continues to ship bullion, as it has been doing for the past two years, with plenty of good ore in sight to run its mill for a year.

"The Exchange Mining Company is running the six-stamp mill above town with good results.

"The El Capitan Mining Company, at Schellburn, is shipping ore to mill, having put it in order. The mill will soon start up.

"A small force of men is at work on the Gray Eagle mine, taking out some excellent ore. This mine is situated in the same belt, and but a short distance from the Star, and promises to be a valuable property.

"Some men are at work on the Ruby Hill mines.

"On the McCurdy mine, a few men are at work. This mine is situated about 50 miles east of Cherry Creek, and has produced some first-class ore, and there is more in sight."

NEW MEXICO.

The Mariposa Mill.—The Cimarron *News and Press* of October 2d says of this mill:

"It has a beautiful and advantageous location between those rich hills in Colfax County, the Aztec and Poñil. On one side of it is situated the Mariposa mine, and about equidistant on the other is the Red Bird, while still another mine, the Echo, is close by the mill. All three of these mines and the mill are owned by one company. They have been sufficiently prospected to develop the fact that they contain a large supply of good-grade ore—probably averaging $30 in free gold.

"The mines have not yet been put in a condition to work advantageously; but there are 100 tons or so of ore on the dump, with which a test run will be made. The ore can be delivered at the mill on burros at a total cost not to exceed $4 per ton, and when the tramway shall have been built from the mines to the mill, this cost will be materially reduced. It is thought that the mill can run thirty tons per day of twenty-four hours. The cost of milling will not exceed $1.50 per ton."

UTAH.

THE SILVER REEF DISTRICT.

The Salt Lake *Tribune* of the 2d inst. says: "It is now authoritatively stated that the transfer of some of the best mines of the Silver Reef District has been agreed upon, and that a company has been organized to begin immediate operations, conditional upon a favorable report by a number of the investors, who, with experts, are expected here daily, for the purpose of making a thorough and final investigation of the property. The reliability of Mr. Rothwell's very able report will thus be fully demonstrated; for no intelligent expert could render a less favorable statement than did that gentleman. The sale is therefore sure to be effected, and a speedy revival of business prosperity will follow as a matter of course. The terms of the impending transfer are not yet made public, and probably never will be.

"It must not be inferred, however, that the mines have been idle during the past season. Development has slowly but steadily progressed, enough ore having been extracted to keep all the mills in operation.

"Thompson & McNally.—This mine has opened up wonderfully. The vein has widened and the ore improved, and now that a tunnel has been run from the east side of the hill, no trouble is experienced in mining and shipping twenty tons of ore per day. Though nominally the property of John W. Kerr, the mine will be worked under the management of the new company, by whom, in all probability, it has been bought.

"The Last Chance is working a light force for the present, but is daily shipping about thirty tons of average ore from the dump.

"The Kinner, the property of Colonel Wall, who personally superintends the mine, is developing some extraordinary ore-deposits. This mine ships daily to the Stormont mill about twelve tons of high-grade ore.

"Stormont Mill.—This mill is kept constantly busy on ore from the above mentioned mines, crushing no less than sixty tons of rock each twenty-four hours,

For the last nine months, the average bullion product of this mill has been $40,000. This month, the product will be upward of $50,000.

"The Leeds Mill continues to run, the company feeling much encouraged over the recent strike.

"It is currently reported that Barbee will put up a new mill on his return from the East, but nothing can be definitely ascertained until the result of his mission is made known."

PROPOSALS.

For the benefit of many of our readers, we compile weekly such proposals and solicitations for contracts, etc., as may be of interest. The table indicates the character of proposals wanted, the full name and address of parties soliciting, and the latest date at which they will be received:

Dredging on the Bar at Mouth of Trinity River, Texas; Neches River, Texas; C. W. Howell, Major of Engineers, U.S.A., New Orleans, La... Oct. 15, 1879.
Building Quarters at Fort Snelling, Minnesota: Charles H. Tompkins, Deputy Quartermaster-General, U.S.A., St. Paul, Minn..... " 16, "
Building Storage Reservoir at Reading, Pa.: William R. McHevain, Esq., Chairman of the Water Commissioners of the City of Reading, Pa..... " 17, "
Building Dorchester Bay Tunnel; Lucius Slade, Chairman Committee on Improved Sewerage, Office City Engineer, City Hall, Boston, Mass ..... " 17, "
Iron Beams; A. W. Flagler, Rock Island Arsenal, Illinois..... " 18, "
Improvement of Harbor at New Orleans, La.; C. W. Howell, Major of Engineers, P.O. Drawer 432, New Orleans, La..... " 20, "
Improving Pearl River, Mississippi, from Jackson to Carthage; C. W. Howell, Major of Engineers, U.S.A., P. O. Drawer 432, New Orleans, La..... " 20, "
Improvement of Savannah River, Georgia; Q. A. Gillmore, Lieutenant-Colonel, Engineers..... " 20, "
Dike in Flushing Bay, New York; John Newton, Colonel, Engineers, Room 31, Army Building, corner Houston and Greene streets, New York ..... " 22, "
Quartermaster's Stores; James A. Ekin, Deputy Quartermaster-General, U.S.A., Jeffersonville Ind..... " 23, "
Improvement of the Harbor of Cedar Keys, Florida; A. N. Damrell, Captain, Corps of Engineers, Mobile, Ala..... ....Nov. 5, "
State Buildings, Lincoln, Nebraska; F. M. Davis, William H. Wilcox, 71 Washington Street, Chicago, Ill..... " 6, "
Graving-Dock at Esquimalt Harbor, at Victoria, British Columbia; George A. Walkem, Chief Commissioner of Land and Works, Victoria, British Columbia..... .....Dec. 27, "

It is proposed to build a railroad from Martinsburg, Pa., on the Morrison's Cove Branch of the Penn. RR. eastward through Clover Creek Valley to Rebecca Furnace. The distance is about 5 miles, and the road will reach valuable deposits of iron.

At the Fort Wayne (Indiana) water-works letting last month, a contract for valves, to the number of about 175, was awarded to the Mohawk & Hudson Manufacturing Company of Waterford, New York.

Ottawa, Ont., Oct. 6, 1879.—The government has to-day advertised for tenders for the construction of 127 miles of railway from Yole to Kamoloops, in British Columbia, to be received up to the 17th of November. This settles the question as to the terminus of the Canada Pacific Railway and the route, so far as British Columbia is concerned. The section for which tenders are called is part of the Burrard Inlet route. It was ready for tenders some months ago, but, pending the results of further explorations in the Peace and Pine River region to the north, nothing was done. This new line will be expensive, but it will open up a very fine region. Mr. Mackenzie formerly called for tenders for this line, but did not award any contract. The British Columbia people will now see that this government is determined to keep faith with them in regard to the railway.

NEW PATENTS.

The following is a list of the new inventions relating to Iron, Coal, Mining Machinery, Chemical Apparatus, and the treating of Precious Metals, etc., from *The Official Gazette of the United States Patent Office*, for the week ending September 30th, 1879:

No. of Patent.	*Title of Invention.*	*Name of Inventor.*	*Residence.*
220,017	Steam-Generator	Thomas M. Fell (a)	Brooklyn, N. Y.
220,028	Ore-Stamping Mill	Horace W. King (b)	Alden.
220,033	Guides for Wire-Rod Rolling-Mills	Charles H. Morgan	Worcester, Mass.
220,034	Turbine Water-Wheel	John S. Rechard	York, Pa.
220,043	Steam-Engine	Charles Tyson	Philadelphia, Pa.
220,054	Steam-Condenser	Adolphe F. Caron	Paris, France.
220,060	Steam-Boiler	Edward Crompton	Liverpool, Eng.
220,061	Device for Preventing Journals from Heating	James Dempsey	Lewiston, Me.
220,070	Mining-Tool	Joseph Gifford	Des Moines, Iowa.
220,084	Pump for Oil-Wells	Robert F. Milford	Parker City, Pa.
220,085	Pump for Oil-Wells	" "	" "
220,087	Gas-Generator	Aimé V. L. Paillard	Paris, France.
220,107	Rotary Blowing Apparatus	Benjamin T. Babbitt	New York City.
220,108	Pumping "	" "	" "
220,109	Apparatus for Breaking or Grinding Various Substances	" "	" "
220,110	Steam-Condensing and Feed-Water-Heating Apparatus	" "	" "
220,111	Grinding-Mill	John G. Baker (c)	Philadelphia, Pa.
220,113	Smoke-Consuming Attachment for Steam-Boilers	James Bardsley	Paris, Ill.
220,148	Manufacture of Aluminium	James S. Howard (d)	Philadelphia, Pa.
220,149	Manufacture of Alloys of Aluminium	" " (e)	" "
220,151	Valve-Regulating Mechanism	Mathias L. Jacquemin	Council Bluffs, Ia.
220,153	Machine for Tapping Water and Gas Mains	Charles D. Judd	Bridgeport, Conn.
220,168	Hydraulic Engine	Hart Z. Norton	New York City.
220,171	Amalgamator	Paschal Plant	Washington, D. C.
220,174	Gas-Engine	James Robson	North Shields, County of Northumberland, Eng.
220,175	Gearing for Operating Force-Pumps	Levi Roderick	Chauncey, Ill.
220,180	Dredging-Machine	Stephen W. Shaw	San Francisco, Cal.
220,205	Combined Speaking-Telephone and Morse Sounder	Amos E. Dolbear	Somerville, Mass.
220,209	Speaking-Telephone	George M. Phelps	Brooklyn, N. Y.

RE-ISSUES.

8,908	Apparatus for Promoting Combustion in Furnaces	Isaac Kendrick, Philadelphia, Pa.
8,917	Grinding-Mill	Mahlon B. Atkinson (f), Sharpsburg, Md.

(a) Assignor to Fell Dynamic Motor Co., Jersey City, N. J.
(b) Assignor of one half of his right to Robert Dunbar and George H. Dunbar, Buffalo, N. Y.
(c) Assignor to the Enterprise Manufacturing Company, same place.
(d) Assignor to Frank G. Bates, same place.
(e) Assignor to Frank G. Bates, same place.
(f) Assignor of two-thirds interest to William Cammack and George W. Decker, Washington, D. C.

FINANCIAL.

Gold and Silver Stocks.

New York, Friday Evening, Oct. 10, 1879.

A better feeling pervades the operations in mining stocks during the week under review, and in nearly all instances we enhance the prices. The feature of the week has been in the stock of the Gold Placer Company, 289,410 shares of which have changed hands at from 15c. on Saturday to 47@40c. to-day.

The business seems to have been very well distributed, and in nearly all instances we note an advance. Hukill shows unusually large transactions, the sales reaching 28,505 shares, and to-day's quotations a decided advance. It is said that an important strike has been made in this mine.

The interest in mining continues to grow, and the quantity of money being invested is enormous. Numbers of valuable mines are being placed here, and investors seem to be acquiring the lessons of prudence and experience which we have sought to inculcate in these columns. The consequence of this is, that while good properties, which come with the indorsement of competent and trustworthy experts, find purchasers without difficulty, the "bubbles" and "wild-cats" are feeling the pressure of public opinion, and are becoming better known and less popular.

Our investors should constantly bear in mind that a spirit of gambling is not an interest in legitimate mining, and that investment in the stocks of companies managed as the Comstocks, Tuscaroras, and many of the Bodie and other Western mines have been, are not to be distinguished from other forms of gambling when the chances are all against the gambler and in favor of the *croupier*. It matters little whether mines be good or bad, if they are managed on the secret plan, not to say dishonestly, the public had better leave them alone.

There are, and will always be, so many good mines offered, that no one should be in such haste to invest as to go in blindly or to invest at all in concerns the past career of which has been disreputable or dishonest.

We have had a number of inquiries concerning mines, some of which will be found answered in our editorial columns, and others are under investigation.

As a rule, mines concerning which so little reliable information is obtainable from the officers of the company as to make it necessary to invoke the aid of a newspaper, are mines it is best to keep out of. At the same time, we will gladly put those interested in the way of getting information that they should have possessed before investing.

The Chrysolite Silver Mining Company took possession of its property at Leadville yesterday, the first payment having been made and the papers passed. Mr. D. S. Appleton, of the firm of D. Appleton & Co., publishers, has been made President, and Mr. Henry A. V. Post, of Clark, Martin & Post, bankers, Vice-President; Col. Drake De Kay, Secretary. The company's offices are Nos. 51 to 57 Boreel Building. The manner in which this stock was placed before the public is rather novel. The stock was offered at $13.89 per share, the net cost to the promoters, one third payable in cash and the remaining two thirds payable March 15th, without interest. A condition of furnishing the stock to subscribers on this basis, however, was that a "call" be given to the promoters for one half of the stock at cost, the call to be good for eight months. Dr. R. W. Raymond estimates the property to have a value of over $5,000,000, while W. S. Keyes and J. B. Low say it can earn $200,000 per month for two years, with every probability of making further developments and continuing the same remarkable earnings for a long time after. As but a very small proportion of the property has been developed, it is but reasonsble to speculate on other important developments. Ore has been struck in the Pandora during the week. W. S. Keyes is on his way West to assume the management for the company. It is expected that the first dividend will be declared the middle of November, and that they will be continuous after that, thereby reducing the payments to be made in March from $4 to $5 per share. There are no operations in the stock, although an advance has been offered and refused.

The O K mine, of Central Colorado, will be placed on the market on the same plan as the Chrysolite. The money to be raised is $250,000—$220,000 for the property and $30,000 to build a new mill. Messrs. W. S. Keyes and J. B. Low estimated the reserves at 35,000 tons, which will net over $500,000.

The large advance that has taken place in the price of lead greatly improves the prospects of those companies producing base bullion, such as Horn-Silver, Eureka, Richmond, Little Pittsburg, Chrysolite, etc The price of lead is up from $40 to $50 per ton from the lowest point.

The Ontario mine produced, in September, $121,000, assay value, shipments; first three days of October, $11,000.

The Ontario Silver Mining Company has declared its 48th dividend of 50c. per share, payable at Wells, Fargo & Co.'s on the 15th inst. The transfer-books closed to-day.

The stock of the Rappahannock Gold Mining Company has passed the Securities Committee of the New York Mining Stock Exchange, and it is anticipated to call the stock early during the coming week. The company has $12,500 cash, and 40,000 shares of stock in its treasury.

OFFICE OF THE HORN-SILVER MINING COMPANY OF UTAH, 44 Wall street,
New York, Oct. 2, 1879.

The Board of Directors have this day declared a dividend of $100,000 (one hundred thousand dollars), being TWENTY-FIVE CENTS per share (par value $25) on the capital stock of the company, payable at the office of the company on and after November 15th. Transfer-books will close November 10th and reopen November 17th. CHAS. G. FRANCKLYN, President.

REVIEW OF THE SAN FRANCISCO MARKET.

The opening prices of mining stocks at San Francisco to-day mark the best prices of the week; indeed, they would seem to indicate a reaction from the apathy prevailing for some time past. These remarks apply to the strictly Comstock fancies, which are at all times sensitive, and the sudden improvement in them may mean nothing; but, on the other hand, it may be the beginning of another manipulation. The principal advance in the list is in the stock of the Union Consolidated, which opens at $70¼, decidedly the best price of the week. This mine is reported as looking well; but the quotations do not respond proportionately. Savage is fairly maintained; and a Virginia City dispatch says the water in the Savage mine has been so far cleared that the north drift on the 2200-foot level has been reached. This is where the heavy flow of water was encountered which flooded the mine. The water is now flowing clear, at a temperature of 164°. It will be boxed from its source, and the heat in the mine controlled. Belle Isle has been quite active on the San Francisco market recently at $5.75@$4.85 per

GENERAL MINING STOCKS.

Dividend Paying Mines.

Name and Location of Company.		Feet on Vein.	Capital Stock.	Shares. No.	Shares. Par Val	Assessments. Total levied to date.	Assessments. Date and amount per share of last.	Dividends. Total paid to date.	Dividends. Last Dividend.	Highest and Lowest Prices per Share at which Sales were Made. Oct. 4. H.	Oct. 4. L.	Oct. 6. H.	Oct. 6. L.	Oct 7. H.	Oct 7. L.	Oct. 8. H.	Oct. 8. L.	Oct. 9. H.	Oct. 9. L.	Oct. 10. H.	Oct. 10. L.	Sales.
Argenta	Nev.	1,500		100,000		20,000	Feb.. 1870	20,000	July .1879 20													
Belle Isle	Nev.	1,500		100,000		200,000		125,000	Sept. 1879 50													
Belcher, G. S.	Nev.	1,040	10,400,000	104,000	100	1,704,400	July. 1879 1 00	15,397,200	Apr. 1876 1 00													
Bobtail, G.	Col.	2,500	1,136,630	227,326	5	*		125,030	Sept. 1879 15													
Bobtail Tunnel, G.	Col.		100,000	20,000	5	52,000	July 1873 0 30	56,000	Dec. 1878 40													
Bodie, G.	Cal.		10,000,000	10,000	100	75,000	May. 1879 1 00	900,000	Aug. 1879 1 00	12¾	11¾	12¾	.....	11	.....	13½	13	13	.....	13	.....	435
California, G. S.	Nev.	600	54,000,000	540,000	100	.....	.....	31,020,000	Aug.. 1879 50	5½	5¾	5½	5¼	5½	5⅝	5⅝	5¼	5¼	5¼	5½	5¼	2,430
Calumet & Hecla, C.	Mich.		2,000,000	80,000	25	1,200,000	.....	14,250,000	May. 1879 5 00	220	219½	.....	.....	219	.....	216	.....	220	217	.....	.....	239
Caribou Con.	Col.	1,400	1,000,000	100,000	10	*		40,000	Sept. 1879 1	.....	.....	.....	.....	5	.....	5	.....	.....	.....	4½	.....	275
Central, C.	Mch		500,000	20,000	25	100,000	June 1862 0 65	1,340,000	Feb. 1879 4 00	.....	.....	.....	.....	29	.....	30	.....	30	.....	.....	.....	106
Chollar, G. S.	Nev.	700	11,100,000	112,000	100	1,806,000	Aug. 1879 0 50	3,080,000	Feb. 1879 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copper Falls, C.	Mch		1,000,000	20,000	50	.....	.....	100,000	Nov. 1871 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cons. Virginia, G. S.	Nev.	710	54,000,000	540,000	100	474,600	June 1873 3 00	42,120,000	Aug.. 1879 50	5⅛	5⅛	4	5½	4¼	5⅜	5½	5⅜	5½	5¼	5½	5¼	1,150
Confidence, G. S.	Nev.	130	2,400,000	24,000	100	256,320	Apr. 1878 0 50	78,000	May.. 1865 8	4	3⅝	4	5⅜	4¼	5⅜	5½	5⅜	5½	5¼	5½	5¼	5,518
Crown Point, G. S.	Nev.	600	10,000,000	100,000	100	2,173,370	Aug. 1879 1 00	11,588,000	Jan.. 1875 2 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka Cons., G. S. L.	Nev.		5,000,000	50,000	100	100,000	May. 1876 1 00	100,000	Sept. 1879 2 00	26¾	25½	26	25½	25½	25	26¼	26	26½	.....	27¼	27	200
Excelsior W'k'r & M. Co	Cal.	525 acres	10,000,000	100,000	100	.....	.....	.....	Sept. 1879 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Findley, G.	Geo.		200,000	200,000	1	.....	.....	8,000	May. 1879 1c	63	60	62	61	65	61	65	63	66	64	64	.....	23,000
Franklin, C.	Mch		500,000	20,000	25	360,000	June 1876 5 00	585,000	Nov. 1871 1 00	20¾	19¾	22	21	22	21	22	21½	22	20¾	.....	.....	5,097
Gould & Curry, G. S.	Nev.	612	10,800,000	108,000	100	3,044,000	July. 1879 1 00	3,826,800	Oct.. 1879 10 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Prize	Nev.	1,500		100,000		100,000	July. 1878 1 00	400,000	Feb. 1878 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Great Eastern		1,200	300,000	300,000	100	.....	.....	10,000	July. 1879 01	32	30	35	33	35	31	32	30	35	32	34	32	32,400
Green Mountain S.M.C.	Cal.	4,350	1,250,000		10	.....	.....	12,500	Aug. 1879 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hale & Norcross, G. S.	Nev	400	11,200,000	112,000	100	3,094,000	Sept. 1879 1 00	1,598,000	Apr. 1871 5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Homestake, G.	Dak		10,000,000	100,000	100	200,000	Apr.. 1878 1 00	240,000	Aug. 1879 30	40½	40	40	.....	40	39½	40	.....	.....	.....	.....	.....	1,055
Hukill, G. S.	Col.	3,288	1,000,000	200,000	5	*		.....	Dec. 1878	2	1.85	2.05	1.85	1.90	.....	1.90	.....	2.10	1.85	2.20	2	28,505
Independence	Nev.	1,500		100,000		75,000	Feb. 1878 15	175,000	July. 1879 25	1.55	1.50	1.65	1.60	1.70	.....	1.65	1.55	1.65	1.60	1.70	1.65	1,660
Kentuck, G. S.	Nev.	95	3,000,000	30,000	100	300,000	Aug. 1878 1 00	1,252,000	Mar. 1870 5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
K. K. Cons.	Nev.			50,000		400,000	Aug. 1879 1 00	50,000	Sept. 1873 0 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leadville	Col.		2,000,000			*		60,000	June 1879 10	2.85	2.80	2.95	2.70	2.75	.....	2.95	2.75	2.80	.....	2.80	2.75	8,120
Leeds	Uth.	3,000		60,000		.....	.....	78,000	Oct.. 1878 0 15	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100
Leopard, L. G. S.	Nev.	1,500	5,000,000	50,000	100	342,500	Sept. 1879 50	162,500	Dec. 1876 0 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Pittsburg	Col.		20,000,000	200,000	100	.....	.....	800,000	July. 1879 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McClinton	Cal.	1,000		60,000		60,000	May. 1879 0 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manhattan	Nev.			100,000		150,000	July. 1879 1 00	400,000	Feb. 1877 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Martin White	Nev.			100,000		650,000	Jan. 1879 1 50	90,000	July. 1879 0 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merrimac, S.	Mas.	1,500	500,000	100,000	5	*	June	120,000	Mar.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota, C.	Mch.		1,000,000	20,000	50	436,000	..... 1869 1 00	1,820,000	Mar. 1876 0 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Modoc	Cal.	4,000		100,000		450,000	Feb.. 1879 0 50	50,000	Dec. 1876 0 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Moose	Col.	39,000	2,000,000	200,000	10	*		550,000	Mar. 1878 0 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	250
National, C.	Mch.		500,000	20,000	25	195,000	Oct.. 1875 1 00	360,000	Oct. 1873 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
N. Y. & Colorado, G.	Col.		1,000,000	50,000	20	*		25,000	July. 1879 0 10	.....	.....	.....	.....	.....	.....	.....	.....	1.65	.....	.....	.....	100
Northern Belle, S.	Nev.	1,600	5,000,000	50,000	100	.....	.....	1,500,000	Nov. 1877 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ontario.	Uth.	3,000	10,000,000	100,000	100	*		2,300,000	Aug. 1879 50	40½	.....	.....	.....	40½	.....	41¼	.....	41	.....	.....	.....	325
Ophir, G. S.	Nev.	675	10,080,000	100,800	100	2,538,200	Nov. 1878 1 00	1,394,400	Mar. 1880 4 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Osceola, C.	Mch.		1,000,000	40,000	25	880,000	Mar 1876 2 00		July. 1879 1 50	28	.....	29½	29	30	29¾	.....	.....	29½	.....	.....	.....	477
Pewabic, C.	Mch.		500,000	20,000	25	185,000	June 1868 3 00	460,000	July 1873 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Potosi, G. S.	Nev	700	11,000,000	112,000	100		0 50	§		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phœnix, C.	Mch.		1,000,000	20,000	50	822,500	Aug. 1879 0 25	10,000	Dec. 1876 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plumas	Cal.		1,000,000	100,000	10	.....	Aug. 1879	151,000	July 1879 5	.....	.....	.....	.....	3.20	.....	3.20	3.15	.....	.....	3.15	.....	600
Quincy, C.	Mch.		200,000	20,000	10	.....	.....	2,220,000	Feb. 1878 5 00	20¾	19¾	22¼	22	23½	21	23	21	23¾	23	.....	.....	4,957
Raymond & Ely, G. S.	Nev.	5,000	3,000,000	30,000	100	660,000	Sept. 1879 1 00	3,075,000	Sept. 1873 3 00	.....	.....	.....	.....	.....	.....	1.50	.....	1.30	.....	1.30	.....	300
Ridge, C.	Mch.		500,000	20,000	25	200,000		90,000	Feb. 1875 1 00	4¾	.....	5	4⅞	5	.....	.....	.....	4⅞	.....	.....	.....	1,820
Rye Patch	Nev.	1,600		30,000		157,500	Dec.. 1878 1 00	105,000	Dec. 1877 0 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Joseph, L.	Mo.	2,000 acs.	1,000,000	100,000	10	.....	.....	250,000		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Savage, G. S.	Nev.	800	11,200,000	112,000	100	4,572,000	July. 1879 1 00	4,460,000	June 1869 3 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seaton, G. S.	Col.	1,700	500,000	50,000	10	*		.....	May 1877 0 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra Nevada, G. S.	Nev.	3,650	10,000,000	100,000	100	3,050,000	Aug. 1879 2 00	102,000	Jan. 1871 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver Islet	Mch									25	.....	25	.....	25	.....	25	.....	.....	.....	.....	.....	415
Silver King	Ariz	1,500	10,000,000	100,000	100	.....	.....	450,000	Nov. 1878 0 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Standard	Cal.		10,000,000	100,000	100	50,000	July 1878 1 00	1,300,000	Sept. 1879 0 50	30⅝	30	29½	..	29¾	29¾	30	29½	29¾	29	30	29¾	2,389
Yellow Jacket, G. S.	Nev.	1,200	12,000,000	120,000	100	3,158,000	Aug. 1879 1 00	2,184,000	Aug. 1871 2 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Non-Dividend Mines.

Allouez, C.	Mch.		1,000,000	20,000	50	940,000	May 1876 5 00															
Alpha, G. S.	Nev.	306	3,000,000	30,000	100	270,000	Aug. 1879 1 00															
Aita	Nev.	600		108,000		1,101,000	Feb. 1879 1 00															
Am. Flag, G.	Ct	5,300	606,000	60,000	10					40c	35c	38c	37c	39c	38c	36c	33c	34c	28c	28c	.....	9,200
Andes	Nev.	2,000	500 000	100,000	....	380 000	May. 1879 0 25															
Baltimore Cons.	Nev.	1,050		84,000	....	1,015,000	Apr. 1878 0 50															
Benton	Nev.	600		108,000		91,800	Dec. 1878 0 50															
Bechtel	Cal.			60,000		96,000	Apr.. 1879 0 25					1.15	1.10	1.05	.....	1.20	1.10					365
Belvidere	Cal.	1,500		60,000		33,000	Feb.. 1879 0 20															
Bertha & Edith. G.	Vir.	645 acs.		500,000	10	*																
Best & Belcher, G. S.	Nev.	545	10,080,000	100,800	100	740,190	Aug.. 1879 1 00															
Buckeye	Col.		2,000,000	100,000	5	*				50c	44c	52c	47c	50c	44c	50c	44c	52c	46c	50c	49c	117,100
Bullion, G. S.	Nev.	943½	10,000,000	100,000	100	3,152,000	Aug. 1879 0 50															
Bulwer	Cal.		10,000,000	100,000	100		July. 1879 1 50					11	.....	11¾	11⅛	.....	.....	11⅜	.....	11¼	.....	330
Cal., B. H.	Dak.		10,000,000	100,000	100	105,000	Sept. 1879 0 50											2.50	.....	.....	.....	500
Caledonia	Dak.	2,188	10,000,000	100,000	100	1,740,000	Aug. 1879 0 50															
Cashier	Col.		500,000	250,000	2	*																
Challenge	Nev.		90	50,000		10,000	Nov. 1878 0 20															
Cleveland, G	Col.	3,715	250,000	25,000	10	*				3.60	.....	3.65	.....	3.65	3.60	3.65	.....	3.65	.....	3.65	.....	1,750
Cons. Imperial, G. S.	Nev.	468	50,000,000	500,000	50	1,075,000	Sept. 1879 0 20			1.25	.....	1.30	1.25	1.20	1.15	.....	.....	.....	.....	1.25	1.20	3,150
Con. Pacific	Cal.	1,400	600,000	60,000	100	*				7⅛	.....	7¼	.....	7	.....	7⅛	7⅜	8	7⅛	8	.....	1,425
Dahlonega	Ga.		250,000	250,000	1	*				18c	.....	21c	20c	22c	20c	21c	20c	23c	21c	23	22c	39,600
Dana, C.	Mch.		500,000	20,000	25	68,000	Jan.. 1863 0 50					50c	.....	50c	.....	.....	.....	.....	.....	.....	.....	500
Day	Nev.	1,500	10,000,000	100,000	100	70,000	Feb.. 1879 0 15															
Dayton	Nev.	1,600	10,000,000	100,000	100	750,000	Apr. 1878 0 25															
De Frees	Ariz	1,500	10,000,000	100,000	100	140,000	May. 1879 15															
Duncan, S.	Ont.		1,200,000	60,000	20	75,000	July 1876 41⅛															
Exchequer, G. S.	Nev.		10,000,000	100,000	100	480,000	July. 1879 1 50					4¼	3⅞	5½	4¾	5½	4¾	4½	.....	.....	.....	2,200
Gold Placer, G.	Col.		5,000,000	200,000	25																	
Goodshaw			10,000,000	100,000	100	30,000	Apr. 1879 0 10			24c	15c	37c	27c	35c	31c	41c	36c	46c	37c	47c	46c	289,410
Granville, G.	N. C.	1,231 acs.	300,000	300,000	1	*						45c	.....	.....	.....	45c	40c	45c	.....	.....	.....	1,400
Humboldt, C.	Mch.		500,000	20,000	25	100,000	Sept 1878 0 15			23c	21c	21c	20c	.....	.....	.....	.....	21c	20c	24c	21c	11,000
Hussey	Nev.	4,500	10,000,000	100,000	100	125,000	Sept. 1879 0 15			85c	.....	1	.....	†	1	.....	.....	1	.....	.....	.....	4,210
International, S.	Ont.		1,200,000	60,000	20																	
Julia, G. S.	Nev.	3, 00	11,000,000	110,000	100	872,500	July. 1879 1 25							60c				65	.....	.....	.....	250
Justice, G. S.	Nev.	2, 00	10,500,000	105,000	100	2,973,500	Aug.. 1879 1 00							4		4	.....	4	.....	.....	.....	40
King's Mountain, G.	N. C.		1,200,000	120,000	10	*																
Kossuth	Nev.	2,700	10,700,000	108,000	100	421,200	Aug. 1877 0 15															
Lacrosse	Col.	3,900	1,000,000	100,000	10	*				17c	.....	20c	15c	21c	.....	19c	.....	.....	.....	.....	.....	1,300
Leviathan	Nev.	2,000	10,000,000	100,000	....	290,000	Aug. 1879 25			33c	31c	38c	33c	33c	32c	31c	.....	32c	.....	30c	29c	7,500
Lucerne	Col.	4,200	5,000,000	500,000	10	*				50c	.....	.....	.....	.....	.....	.....	.....	.....	.....	50c	.....	40
Madison, C.	Mich.		500,000	20,000	25	123,000	Sept 1876 0 10			28c	.....	28c	.....	27c	.....	27c	...	28c	26c	28c	23c	7,000
Mariposa preferred	Cal.	44,387	5,000,000	50,000	100	1,425,000	June 1877 1 00															
" common	Cal.	acres.	10,000,000	100,000	100	1,425,000	June 1878 1 00															
May Belle		1,500	10,000,000	100,000	100	.....	Sept 1879 0 10															
McCracken	Ariz	4,500	10,000,000	100,000	100	100,000	Sept. 1879 0 25															
Mexican, G. S.	Nev.	600	10,080,000	100,800	100	409,400	Sept. 1879 1 50															
Mono	Cal.	750	5,000,000	50,000	100	125,000	Sept. 1879 1 00					6⅝	.....	.....	.....	.....	.....	.....	.....	.....	.....	100
Navajo	Nev.	500	10,000,000	100,000	100	145,000	Feb. 1879 0 20			40c	.....	.....	.....	.....	.....	.....	.....	35c	.....	.....	.....	200
New York	Nev.	1,000	10,000,000	100,000	100	80,000	Apr. 1879 0 40															
Orig. Keystone	Nev.	1,500	10,000,000	100,000	100	125,000	Aug. 1879 0 25															
Overman, G. S.	Nev.	1,200	3,840,000	38,400	100	3,404,280	Mar. 1879 3 00															
Petherick, C.	Mch.		500,000	20,000	100	165,533	..... 1876 0 50															
Quicksilver preferred	Cal.	8,500	4,291,360	42,913	100	*				50	.....	50½	.....	50	49¾	51⅜	50	51½	51½	52½	53	4,625
" common	Cal.	acres.	5,708,700	57,087	100	*	Apr..			14½	.....	14¾	14¼	14¾	14¼	14⅜	14	15	14½	14⅜	.....	1,950
Seg. Belcher, G. S.	Nev.	160	640,000	6,400	100	244,800	Apr.. 1876 1 00															
Shamrock																						
Silver Hill, G. S.	Nev.	5,400	10,800,000	108,000	100	1,404,000	Feb 1879 0 50															
Silver Prize	Nev.	1,500	10,000,000	100,000	100	65,000	Mar 1879 0 25															
South Rite G. M. Co.	Cal.		2,500,000	100,000	25											1	.....					100
Star, C.	Mich.		500,000	20,000	..	265,000	Mar 1876 0 50			1¼	.....	1⅜	1¼	1⅜	1⅛	1⅜	‡	1⅜	1¼	.....	.....	3,825
Superior, C.	Mich.		500,000	20,000	25	340,000	..... 1878 0 25			.....	.....	40c	37½	40c	.....	40c	37½	35c	32½	.....	.....	1,650
Sutro Tunnel	Nev.		20,000,000	2,000,000	4		July 0 50			3½	.....	3¾	3	3¼	3½	3¼	3	4	3¼	4⅛	3¾	21,550
Tiptop	Ariz		10,000,000	100,000	100	120,000	Apr. 1878 0 50			1.10	1.05	.....	.....	1.05	.....	.....	.....	1.10	.....	1.05	.....	1,000
Tioga	Cal.	1,500	10,000,000	100,000	100	80,000	..... 1879 0 20			3.15	.....	3.15	3	3	.....	3	.....	3.20	2.75	3.15	3.05	1,575
Trio	Col.	1,250	150,000	150,000	1	.....	Apr															
Trojan	Nev.	1,500	10,000,000	100,000	100	265,000	Mar. 1879 0 25															
Tuscarora	Nev.		10,000,000	100,000	100	35,000	Sept. 1879 0 10			19c	18c	20c	19c	19c	.....	21c	20c	35c	28c	30c	28c	28,500
Union Cons. G. S.	Nev		10,000,000	100,000	100	860,000	July. 1879 2 00															
Utah	Nev	1,000	2,000,000	20,000	100	1,060,000	Jan.. 1879 2 50															
Ward	Nev	1,200	11,000,000	110,000	100	99,000	Apr.. 1879 0 30															
Wells Fargo	Nev	1,500	10,000,000	108,000	100	243,000	..... 1879 0 25															

c. Gold. s. Silver. L. Lead. c. Copper. * Non-Assessable. ‡1 1-16 ‡1 5-16

Total Assessment levied to date..... $65,623,998 Total Dividends paid to date..... $155,873,080 Total Shares sold during the week..... 212,433

share. After paying dividend No. 4, on the 6th inst., of 75 cents per share, this company carries over a surplus of $74,581. This mine is said to be looking very well, and, at the recent annual meeting of the company, the receipts during the year were shown to be $390,426, of which $386,440 was from bullion. Of the disbursements, $125,000 was for three dividends, and $49,593 discount on bullion, with $137,984 cash in bank. The mill has been running only three months. Bodie opens at $13, the best price of the week. Ophir shows considerable improvement in recent dealings. The main incline in this mine, from the 2400 level, is down over fifty feet, and is said to be in favorable-looking ground. A drift has been started to connect the 2300 levels of the Ophir and Union Consolidated. This company had on hand bullion valued at $23,000 on the 26th ult., making a total to that date of about $65,000, which is nearly $49,000 in excess of the previous month's product. Eureka Consolidated closed yesterday at $26, the best price of the week. It is rumored that the Nevada Bank holds 18,000 shares of this company's stock, and that a grand struggle is in progress for the control, which will culminate at the annual election, to occur during the present month. It is also stated that the recent flurry was caused by an attempt on the part of the firm of Haggin & Tevis to corral the floating stock, and that they succeeded in purchasing about 1000 shares, the majority that was put on the market at the advanced rate which ruled. These gentlemen control the adjoining property, the K K Con., and would like to acquire possession of the Consolidated, which would enable them to work both mines through a combination shaft, and also to solve the water problem that now vexes them in the former mine. Raymond & Ely opens at a slight improvement, and it is said that the prospects of this mine have greatly improved. Independence opens at $1⅜, the same and only quotation telegraphed during the week ending the 4th instant, and to-day it is said that this mine is looking well and is shipping bullion. Grand Prize is fairly maintained, closing yesterday at $2.05. The ore taken from this mine is from the upper stopes, water interfering with the production from the lower levels. Hillside shows considerable strength, with limited dealings in recent San Francisco transactions, the prices ranging from $1.75 to $1.90 per share. The ledge on the fifth level of this mine is said to show considerable improvement, and new machinery is arriving, and being rapidly put into place. Scorpion closed yesterday at $3½ per share, and considerable activity in this stock is noted on the San Francisco market. As far as we can judge, however, notwithstanding *favorable assays*, at 120 feet depth, the value of this mine is absolutely zero. Manhattan nearly maintains its customary output from ore which mills nearly $200 per ton, and yet pays nothing to the stockholders. Of course no sane man would intrust a mine to such management.

The *Commercial Herald* of October 2d says of the market:

"The result of the week's operations in mining shares has been to lessen prices and reduce the volume of transactions. It seems as if all good indications are largely discounted in advance; for instance, at the present time favorable reports are made public of the lower levels of the Union Con. and Ophir mines, and immediately upon such announcement the stock declines in a very rapid and apparently inconsistent manner; but when we take into consideration that these prospects have been manipulated in the stock market for all they are worth, through the instrumentality of the diamond drill, it ought not to be so surprising to the uninitiated. Sometimes, however, the facts of a good find can not be concealed for any length of time, so that some few outside lucky purchasers may reap a handsome benefit, but this is the exception, not the rule. While every body is waiting for the Comstock to do better in the production of bullion, a number of outside districts are making increased shipments from month to month, with very hopeful prospects from a number of new and virgin claims."

COAL STOCKS.

NAME OF COMPANY.	Capital Stock.	SHARES. No.	SHARES. Par Val.	Last Dividend. Mo.	Y.	R't.	Rate per Ann.	Quotations of New York stocks are based on the equivalent of $100. Philadelphia prices are quoted, so much per share. Oct. 4. H.	L.	Oct. 6. H.	L.	Oct. 7. H.	L.	Oct. 8. H.	L.	Oct. 9. H.	L.	Oct. 10. H.	L.	SALES.
	*		*				Per c'nt													
Ches. & O. RR	15,000,000	150,000	100	.....	..	....	....	9⅞	10	9¾	.....	11¾	9⅞	12⅜	11¼	13⅜	11¼	14	13	*34,389
Consol. Coal.	10,250,000	102,500	100	Jan.	77	2½	....	30	....	....	....	....	....	....	....	....	....	....	....	100
Del. & H. C.	20,000,000	200,000	100	Aug	76	4	9	62¾	61½	63½	62¼	62	61	65	61⅜	65¾	64	67½	65¾	32,841
D., L.&W. RR.	28,800,000	524,000	50	July	76	2½	5	73	71	72	71	72½	71	75½	71⅜	77	74⅝	79⅜	77	224,154
Lehigh C.& N	10,148,530	208,971	50	Nov	76	1½	5½	25⅜	25	25½	25¼	25¼	25	25¾	25⅜	26⅜	25½	27¼	27½	19,581
Leh. V'y R. R	27,228,855	540,858	50	J'ne	79	1	4	45½	....	45⅞	45½	46	45½	46¼	46	47⅛	46¼	49¼	49⅛	3,302
Maryl'd Coal	4,400,000	44,000	100	Jan.	76	1¼	1¼	22	21½	23	21	23½	22¼	22⅝	22½	22¼	21⅝	23¼	25½	5,654
Morris & Es'x	15,000,000	300,000	50	July	79	3½	7	94¾	94	94½	....	94½	94⅛	95⅝	94½	95½	95	97	95¾	14,440
N. J. C. R. R.	20,600,000	206,000	100	Apr	76	2½	2½	62¾	61	63⅝	61¼	63¾	61½	65⅛	61½	67¾	64¼	70¼	68	144,035
Penn. Coal...	5,000,000	100,000	50	Aug	79	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Penn. R. R...	68,870,200	1,337,404	50	May	79	2	8	43¾	43¼	44⅛	43¼	44⅝	44	44⅜	44	44½	44⅛	44⅝	44⅜	50,554
Ph. & R. R. R	34,278,175	685,563	50	Jan	76	4	2½	10	21¾	20¾	22⅜	21¼	22	21¼	23⅛	23⅝	23¾	22½	25½	25⅜	199,241

The Delaware & Hudson Canal Co. has paid in dividends to date $38,821,104, and the Philadelphia & Reading, $43,012,497

Total Sales.. ..... 728,091.

* Of these, 11,409 shares were 1st preferred, selling at $16@$23, and 1700 shares were 2d preferred, selling at $11½@$11¾.

Copper and Silver Stocks.

[Reported by S. G. STUDLEY, Commission Stock Broker, Member of the Boston Stock Exchange, No. 51 State street, Room M, Merchants' Exchange.]

BOSTON, Oct. 9, 1879.

The market for coppers has been exceedingly active and strong all the week, with a gradual advance in the whole list until to-day, when the market closes dull, heavy, and lower, with the exception of Quincy, which holds the advance, and closes very firm.

Calumet & Hecla advanced to 220, closing at 217 asked.
Copper Falls, 3½@4.
Franklin advanced for 22, closing 20@20¼.
Central, 29@30.
Osceola, 30 asked.
Pewabic, 4 bid.
Quincy, 23@23¼.
Ridge, 4¾@5.
Humboldt, $1, sales; that asked.
Mesnard, 3⅝@3¾.
Star advanced to 1½, closing 1⅜@1⅝.
Rockland advanced to ⅝@¾.
Blue Hill, 4¼, sales.

SILVER STOCKS.

Silver Islet, dull at 25 asked.
Duncan advanced to 5¼, sales, declining to 4¼@5.

A significant commentary on the revival of the copper industry is furnished in the following record of transactions of the stocks of companies during the past week in Boston, stocks which were not of sufficient importance one month ago to be honored with a quotation:

Mesnard, 8900 shares		2¼@3¾
Pontiac, 3450	"	50c.@$1¼
Blue Hill Copper Co., 1000 shares		4¼@4½
Rockland, 1650 shares		62½@82½c.
Winthrop, 200	"	50@75c.
Hungarian, 200	"	30@35c.

Miscellaneous Stocks and Quotations.

Sales and quotations of the stocks and bonds dealt in at New York, Philadelphia and Baltimore, for the week ending the 9th inst. are given in the following tables. The Philadelphia quotations will have a * affixed. The Baltimore quotations are indicated thus †.

STOCKS.	Par Value.	High'st	Lowest	Closing	Sales: Shares.
American Coal Co.	$25	50⅞	50½	.....	252
St.L.,I.M.& S.R.Co..	100	48¾	42¾	46½	‡30,290
Spring Mt. Coal Co.	50	55	.....	55	650
*Cambria Iron Co..	50	.....	.....	.....	.....
*Penn. Salt Mf'g Co.	50	.....	.....	.....	.....
*Westm'land C. Co.	50	.....	.....	.....	.....
*Buck Mt. Coal Co..	50	.....	.....	.....	.....
*Schuyl. Nav. Co...	50	.....	.....	.....	.....
†B.&O.RR.Co.1st pf	.....	.....	.....	.....	.....
†B.&O.RR.Co.2d pf	100	106	.....	.....	110
" " " com	90	141½	138	.....	426
†George's C'k C. Co	100	.....	.....	.....	.....
†S. Clara M'g Co...	100	.....	.....	.....	.....
†Atlantic Coal Co.	10	79	.....	.....	300

BONDS.	Princ'l. When Due.	Int'est. When Due.	Hig'st.	Lowest	Amount.
D., L. & W., 7s, conv	1882	J. & D.	.....	.....	.....
" " " " 2d 7s....	1907	M. & S.	103½	.....	$5,000
M. & E., 1st con., 7s.	1915	J. & D.	103½	102	47,000
" " " 2d 7s.....	1891	F. & A.	.....	.....	.....
" " " 7s, 1871...	1901	A. & O.	107½	107¼	4,000
N.J.C.,1stmtge.new	1890	F. & A.	114⅞	114½	7,000
" " " 1st mtge.,con	1899	Q.	101	99½	‡147,000
" " " convt. 7's ...	1902	M. & N.	102¼	101¼	‡33,000
" " " Adimt bds...	1903	M. & N.	105	104¼	33,000
" " " Income.....	1908	M. & N.	80	79	20,000
L. & W. B., con....	1900	Q.	87½	86	‡439,000
" " " Income	1888	M. & N.	60	55½	58,000
Am. Dock & Imp. 7s	1886	J. & J.	96	.....	3,000
St.L.I.M.& S..1st mt	1892	.... ..	114½	.....	$235,000
" " " " " 2d, 7s	1897	F. & A.	97½	97¼	151,000
St. L. & I., M. C. & F., 1st, 7s.....	1891	M. & N.	103½	.....	9,000
St. L. & I. M. Cairo,					
A. & T., 1st, 7's..	1897	J. & J.	97	90¼	7,000
Ches. & O., 1st s'rs b	1908	J. & D.	52¼	48½	162,000
" " 6s, cr. int. df	1918	M. & N	28	23	167,000
D & H C Co., 1stm.rg	1884	J. & J.	101½	.....	3,000
" " " " " "	1891	J. & J.	104	103½	20,000
" " " " m.loan cp	1894	A. & O.	.....	.....	.....
" " " " " rg.	1894	A. & O.	105	104	12,000
" " " " new mge.	.....	.....	.....	.....	.....
" " " " 1st Pa. div., 7s, coup.	1917	J. & D.	109½	106	40,000
" " " " 1st Pa.. div., 7s, rg	1917	M. & N.	.....	.....	.....
V.R.,1stm.6s.cp.	1898	M. & S.	.....	.....	.....
" " " rg.	1898	J. & D.	.....	.....	.....
" " " 2d m. 7s,rg.	1910	J. & D.	121	.....	2,000
" " " con.m.6s,rg	1823	M. & S.	107¼	107	4,000
" " " 6s cp.	1923	J. & D.	.....	.....	.....
*Pa.RR.,1st m.6s,cp	1880	J. & D.	.....	.....	.....
" " g. m., 6s, cp.	1910	J. & J.	.....	.....	.....
" " " 6s, rg.	1910	J. & J.	115	..	3,000
" " con.m.6s,rg.	1905	A. & O.	.....	.....	.....
" " " 6s, cp.	1905	Q.	108	....	1,000
" " new loan, 5s	.....	J. & D.	112¼	.....	10,000
*P.& R. R., 1st m.6s, R. C. 43-44.....	1880	J. & J.	.....	.....	.....
*P. & R. R., 1st m.6s, R. C. 48-49.....	1880	J. & J	.....	.....	.....
*P.&R.R.,gen6s,G C	1908	J. & J.	76	75	119,000
" " " scrip....	1882	J. & J.	70¼	69	11,724
" " " deb.ex-cp.	1893	.....	36	35	3,000
" " " c.m.7s,cp.	1911	J. & D.	.....	.....	.....
" " " c.m. 7s, rg.	1911	J. & D.	.....	.....	.....
" " " cvt. 7s,exc	1893	J. & J.	40	.....	9,000
*L.Nav.Co.,6s,rg.m.	1884	J & Q.	.....	.....	.....
" " RR., rg. m.	1897	F. & Q.	109½	108½	150
" " cvt. Gold R.	1894	M. & S.	101	.....	1,000
" " m Gold R. C.	1897	J. & D.	102	.....	3,500
" " con.m.7s,rg.	1911	J. & D.	94	93	13,000
*P.& N.Y.C.,7s,R.C.	1896 1906	J. & D.	.....	.....	.....
*Pa Canal, 6s...	1910	J. & J.	80	.....	2,000
*Schuyl. Nav., 6s...	1882	.....	70	.....	650
*Sus.Coal, 6s, c....	1911	J. & J.	... ..	.....	.....
†Balt.&O. RR., 6s..	1880	J. & J.	.....	.....	.....
" " " " 6s..	1885	A. & O.	.....	.....	.....
.....	.....	.....	.....	.....	.....

Total transactions for the week.. .....$1,685,024

‡ Assented

§ Of this, $225,000 were preferred income bonds, selling at $74½@$77½.

‖ Of this, $41,000 were preferred income bonds, selling at $62½@$67¼.

Coal Stocks.

NEW YORK, Friday Evening, Oct. 10, 1879.

There has been the wildest of speculation in the coal stocks, and prices have been made to "boom." It was a well-known fact during the week that there was no possibility of a coal combination being formed

SAN FRANCISCO MINING STOCK QUOTATIONS.

Daily Range of Prices for the Week.

NAME OF COMPANY	CLOSING QUOTATIONS. Oct. 3.	Oct. 4.	Oct. 6.	Oct. 7.	Oct. 8.	Oct. 9.	Opening. Oct. 10.
Alpha.....	17	16½	15½	17½	17	16½	17
Alta.....	5⅝	5¼	5¼	5¼	5¼	5¼	5¼
Argenta..	....	....	....	....	....	....	....
Bechtel....	1⅛	1⅛	1.05	1.05	1.10	1.15	....
Belcher	3⅞	3⅝	3¾	3¾	3¾	3¾	3¾
Belle Isle ..	....	....	....	....	....	....	....
Benton.....	....	....	....	....	....	....	....
Best & Bel.	17¾	17½	16½	17	17¼	17¼	17¼
BlackHawk	....	....	....	....	....	....	....
Bodie.....	12	11⅜	10½	12½	12¾	12⅝	....
Booker.....	....	....	....	....	....	....	....
Boston Con.	1.40	1.40	1.40	1.40	1.40	1.35	....
Bullion.....	....	....	....	....	....	....	....
Bulwer.....	11⅛	11¼	11¼	11⅛	11	11¼	....
Caledonia..	....	....	....	....	....	....	....
California..	5⅝	5¼	5⅝	5⅝	5⅝	5⅝	5⅝
Chollar.....	6⅞	6⅞	6¾	7	7	7	7
Confidence.	9½	9½	....	9¼	....	....	....
Con. Imp ..	....	....	....	....	....	....	1¼
Con.Pacific.	7½	7¼	7⅛	7	7¼	7¾	7½
Con.Va.....	5¼	5⅝	5⅝	5¼	5⅝	5⅝	5⅝
Crown P'int	4	4⅛	3⅞	4⅛	4⅛	4⅛	4⅛
Endowm'nt	....	....	....	....	....	....	....
Eureka Con	25	24½	24	25½	24	26	....
Exchequer.	5½	5½	5⅛	5⅝	5⅞	5⅝	....
Goodshaw..	....	....	....	....	....	....	....
Gould &Cur	10⅜	10	9¾	10	10⅛	10	10
Grand Prize	2	....	2	2⅛	2	2.05	....
Hale & Nor.	12½	11¾	11¼	12	12¼	12⅛	13½
Hamburg..	....	....	....	....	....	....	....
Homestake	....	....	....	....	....	....	....
Hussey.....	....	....	....	....	....	....	....
Indep'd'nce	....	....	....	....	....	....	....
Jackson....	....	....	....	....	....	....	....
Julia Con..	4	4	3⅞	3⅞	4	3¾	3¾
Justice.....	3¼	3⅛	3	3⅛	3⅛	3.20	3¼
Kentuck ..	....	4	....	....	....	4	....
Kossuth....	....	....	....	....	....	....	....
Leopard....	....	....	....	....	....	....	....
Leviathan..	60c.	60c.	....	55c.	55c.	½	....
Manhattan..	....	....	....	....	....	....	....
Mar. White.	....	....	....	....	....	....	....
McClinton..	....	....	....	....	....	....	....
MeadowVal	....	....	....	....	....	....	....
Mexican....	33	32¾	30½	31¼	31¼	30¾	*
Mono.....	5¼	5	5¾	7	6⅝	6½	....
Navajo.....	....	....	....	....	....	....	....
North. Belle	....	3½	3⅝	3½	3¼	3¾	....
N. Standard	....	....	....	....	....	....	....
Ophir.....	36¼	36½	32¼	32½	34	32¾	34
Orig. K'ys'e	....	....	....	....	....	....	....
Overman...	9⅝	9½	9	9	9	9	....
P. Sheridan	....	....	....	....	....	....	....
Potosi.....	....	....	....	....	....	....	....
Ray. & Ely.	1½	1⅛	1.20	1.20	1¼	1¼	....
Richer.....	....	....	....	....	....	....	....
Savage.....	12⅛	12¼	12	12	13	12½	12½
Scorpion...	3⅜	3.30	3¼	3½	3.45	3½	....
Seg.Belcher	....	....	....	....	....	....	....
Sierra Nev.	47½	47¾	47¼	48½	48¾	48	49¾
Silver Hill.	1.45	1½	.....	1½	1.45	1¼	1¼
Silver King	....	....	....	....	....	....	....
Standard....	....	....	....	....	....	....	....
Summit.....	....	....	....	....	....	....	....
Tioga.....	2¾	2¾	.....	2½	2⅝	2.60	....
Tip Top....	....	....	....	....	....	....	....
Union Con.	64	65	63	64	67½	66	70¼
Utah.....	20½	20	19½	20	20	20	20
Ward	....	....	....	....	....	....	....
WashoeCon	....	....	....	....	....	....	....
Yel. Jacket.	15½	15¾	15	15¼	16	15¼	15¼

* $32¼@$33¼.

but still that made no difference with the public. There was a belief, however, that there was the power to put up the prices of the stock, come what would, and the public bought and prices went up. The gentlemen who are manipulating this advance certainly do not put a value upon these properties equal to the present quotations, and some day they will remove the prop, and then, look out. The highest prices were recorded to-day. Delaware, Lackawana & Western reached $79¾, with the last sale at 78⅝. Delaware & Hudson touched 67¼, with the last sale at 67¼. New Jersey Central touched 70¼, with the last sale at 69¾. Philadelphia & Reading has been very active in Philadelphia, the sales amounting to 199,241 shares. This has been brought about largely by the announcement that the stock will probably be listed on this market. The price has advanced nearly $5 per share. There has been a liberal business in the Maryland coal stocks. Maryland Coal Company has been the feature, however, selling up to 23½ on Tuesday, with the last sale to-day at 22¼.

Gas Stocks.

NEW YORK, Friday Evening, Oct. 10, 1879.

The gas stock market is quiet and strong, and any changes in our quotations are to higher prices.

Two shares of the *Boston Gas Co.* sold in the Stock Exchange this week at 780@800.

The following list of Companies in New York and vicinity is corrected weekly by GEORGE H. PRENTISS, Broker and Dealer in Gas Stocks, No. 24 Broad street, New York

Companies in New York and Vicinity.	Capital Stock.	Par.	Dividends. Rate per ann.	Dividends. Am. of last.	Dividends. Date of last.	Quotat'ns Bid.	Quotat'ns As'd.
	$		P. ct.				
Mutual, N. Y.	5,000,000	$100	6	1½	July, '79	55	60
" Bonds...	90,000	1,000	6	3½	Aug., '79	100	104
N. York "	4,000,000	.....	8	4	May, '79	92½	97
Metrop. "	2,500,000	100	10	5½	Aug., '79	110	120
" Certfs..	1,000,000	.....	7	5	Aug., '79	98	101
Harlem "	1,850,000	50	6	3	Feb., '78	37	45
Manhat. "	4,000,000	50	....‡	5	June, '79	145	155
Brooklyn, Bkln.	2,000,000	50	15	5	May, '79	122	125
Nassau	1,000,000	25	....‡	3	July, '79	60	61
" Certfs...	700,000	1,000	7	3½	May, '79	90	95
People's.....	1,000,000	10	....‡	3½	Jan., '76	20	25
" Certfs....	250,000	1,000	7	3½	July, '79	80	85
" Bonds....	375,000	.....	7	3½	May, '79	90	96¼
Metrop. "	1,000,000	100	5	2½	May, '79	55	60
W'msb'g "	1,000,000	50	8	2	July, '79	70	80
" Certfs...	1,000,000	.....	7	3½	July, '79	90	95
Citizens'.....	1,200,000	20	....‡	2½	July, '79	60	61
" Bonds...	315,000	1,000	.....	3½	Apr., '79	98	102
J. C., N. J.....	750,000	20	10	7½	July, '79	135	145
Municipal, N. Y.	2,000,000	100	12	3	June, '79	139	150
" Bonds..	750,000	100	7	3	May, '79	105	110
.....	.....	.....	.....	.....	.....	.....	.....

THE BULLION MARKET.

NEW YORK, Friday Evening, Oct. 10, 1879.

Under an increasing demand in London for silver for the East Indies, and an advance in India bills at the award on Wednesday, silver has advanced about 1 cent an ounce, and has the appearance of a firm if not an advancing market, for this autumn.

DAILY RANGE OF SILVER IN LONDON AND NEW YORK, PER OZ.

Date.	London Pence.	N. Y. Cents.	Date.	London Pence.	N. Y. Cents.
Oct. 4.....	51 9-16	112	Oct. 8	52 11-16	a52 *
Oct. 6.....	51⅝	112	Oct. 9	52	113
Oct. 7.....	51⅝	112	Oct. 10	52	113

* 112⅛@113.

BULLION SHIPMENTS.

We give below a statement showing the latest bullion shipments, in addition to those announced in our issue of October 4th, 1879:

September	16th	Isabella	Nev	2,638 ozs.
"	16th	Alexander	"	$8,199.16
"	17th	Mineral Park Mill	Ariz	7,000.00
"	20th	Silver City	Idaho	29,513.88
"	21st	Martin White	Nev	3,921.00
"	22d	Northern Belle	"	4,442.00
"	22d	Passing Eureka	"	13,714.90
"	22d	Pioche	"	8,443.00
"	22d	Phenix	Ariz	2,122.14
"	24th	Martin White	Nev	3,190.78
"	24th	Northern Belle	"	4,528.96
"	24th	Gold Hill Quartzburg	Idaho	27,835 00
"	24th	Paradise	Nev	5,643.11
"	24th	Florida Hill	Idaho	1,700.00
"	25th	Eureka Consolidated	Nev	3,190.78
"	25th	Tailings Mill	"	1,530.57
"	25th	Belle Isle	"	23,987.13
"	25th	Tip Top	Ariz	36,500.00
"	25th	Alexander	Nev	7,162.11
"	26th	Silver King (concentrations)	Ariz	10,000 lbs.
"	26th	Alexander	Nev	8,199.66
"	26th	Christy	Utah	2,614.93
"	26th	Tombstone	Ariz	20,838.00
"	26th	Martin White	Nev	7,112.11
"	26th	Florida Hill	Idaho	7,737.00
"	26th	Hillside	Nev	6,000.30
"	27th	Richmond	"	16,314.43
"	27th	Stormont	Utah	6,300.00
"	27th	Horn-Silver	"	5,000.00
"	27th	Pioche	Nev	5,202.79
"	27th	Ontario	Utah	3,151.96
"	27th	Isabella and Mill	Ariz	10,000.00
"	27th	Silver King (concentrations)	"	10,000 lbs.
"	28th	Belle Isle	Nev	14,700.00
"	28th	Independence	"	2,100.00
"	28th	Eureka Con	"	1,800.00
"	28th	Eureka	"	57,026 lbs.
September	29th	Passing Eureka	"	900.00
"	29th	Hillside	"	6,000.00
"	29th	Morgan, Germania, and Old Telegraph	Utah	12,215.00
"	29th	Ontario	"	7,500.00
"	29th	Christy	"	2,091.28
"	29th	Stormont	"	6,619.80
"	29th	Ontario	"	4,142.02
"	29th	Horn-Silver	"	36,916 lbs.
"	29th	Old Telegraph	"	4,530.00
"	29th	Bodie Con	Cal	29,500.00
"	29th	Old Telegraph	Utah	1,500.00
"	29th	Florida Hill	Idaho	17,000.00
"	29th	Independence	Nev	2,100.00
"	30th	Express from Eureka	"	5,124.52
"	30th	Richmond	"	11,424.48
"	30th	Horn-Silver	Utah	5,000.00
"	30th	Old Telegraph, and Chicago	"	4,530.00
"	30th	Old Telegraph	"	1,500.00
"	30th	Ontario	"	4,142.02
"	30th	Christy	"	2,091.28
"	30th	Stormont	"	6,600.00
October	1st	Rocky Mountain Bank	Colo	10,200.00
"	1st	Eureka	Nev	900.00
"	1st	Horn-Silver	Utah	2,500.00
"	1st	Stormont	"	6,620.00
"	1st	Germania and Chicago	"	5,550.00
"	1st	Ontario	"	4,347.21
"	1st	Idaho Mines	Idaho	4,172.00
"	1st	Bodie	Cal	25,000.00
"	1st	Paradise G. and S. M	Nev	10,082.00
"	1st	Paradise Valley	"	5,473.00
"	2d	Ontario	Utah	3,064 43
"	2d	Old Telegraph and Chicago	"	4,050.00
"	2d	Horn-Silver	"	2,500.00
"	2d	Stormont	"	8,863.20
"	3d	Horn-Silver	"	7,500.00
"	3d	Eureka Consolidated	Nev	67,830 lbs.
"	3d	First National Bank	Colo	7,000.00
"	3d	Caribou	"	6,259 00
"	3d	Ontario	Utah	2,671.62
"	7th	Bodie Consolidated	Cal	25,000.00
No date.		Stafford White Pine	Nev	5,363.73
"		Eberhardt "	"	2,000.00

Martin White.—Bullion valued at $35,465.24 was shipped by this company during the month of September—the smallest shipment since the mill started.

Raymond & Ely.—The bullion shipment of this mine for August, 1879, was as follows:

Gold	$1,826.73
Silver	19,193.03
Sale of ore to Hillsdale Co	4,119.72
Total	$25,139.47

Richmond.—This company, of Eureka, Nev., during the month of September, shipped bullion to the value of $122,390.

Eureka.—During August, this company produced $222,500; $62,000 in gold, $104,300 in silver, and $55,000 in lead.

Manhattan.—For the week ending October 1st, the Manhattan mill received 120 tons and 600 pounds, of the assay value of $20,279.60 Of this amount, $16,254.24 was from custom ores, $2671.83 from tribute ores, $9888.57 from the Curtis shaft, and $464.96 from the North Star shaft.

The shipment of base bullion from the Eureka Consolidated mine, during September, amounted to $2,013,440 pounds.

Queen Mine.—The Queen mine, of Eureka, Nev., shipped to the Richmond furnaces, September 25th, several tons of ore, which assayed $370 per ton.

Following is an official statement of the ore extraction and milling operations of the bonanza mines for the week ending September 27th, as compared with the previous week:

	Previous week.	Past week.
Con. Virginia:		
Extracted, tons	846	927
Delivered to mills	828	864
Remaining in ore-house	117	198
California:		
Extracted, tons	981	1,080
Delivered to mills	981	1,080

Silver Connor.—The Silver Connor of Nevada shipped 75 tons high-grade ore to Richmond mills during the summer.

Belle Isle.—We are indebted to the courtesy of the Secretary of the Belle Isle Mining Company for the official report of its production for the month of September, 1879:

Tons of ore mined		620
" " treated		510
Bullion yield of above	Silver	$79,280.40
	Gold	9,393.96
Total		$88,654.36

The above is for four weeks' shipments without any clean-up.

Production of the Stormont Mining Company.—The Stormont Mining Company, of Silver Reef, Utah, produced, from July 20th, 1879, the date of incorporation, to July 31st, bullion to the value of $15,593
The August product amounted to 42,383
The September product amounted to 51,850

Total product for ten weeks assay value $109,726

East Bobtail (Colorado) Output.—There was shipped from this mine, on the 3d inst., gold to the amount of over $4000.

A car-load of ore, from the Dun Glen mine, Humboldt County, Nev., was recently sold in Salt Lake City, netting the owners $5000.

The Gold Hill *News* is responsible for the following:

"SONORA, CAL., Sept. 29.—James G. Divoll has shipped through Wells, Fargo & Co., to San Francisco, about 900 pounds of gold, or $189,000, taken from a pocket mine, located at the north end of Washington street, within the city limits, and the result of but a few weeks' work. The company consists of three men, two of them doing the work. Within the past two years, they have taken out over $250,000 at Yankee Hill, about four miles from here. Nathan Arnold has struck another rich chute in his mine, and has taken out about $9000 in less than two weeks."

The Lexington and Alice mines, of Butte, Montana are now producing at the rate of $20,000 per month each.

LEADVILLE ORES.—We are indebted to the *Reveille* of the 3d inst. for the following items:

A. R. Meyer & Co.'s Works.—For the month of September, these works purchased three thousand one hundred and thirty-eight tons of ore, and handled three thousand four hundred and twenty tons. The average value of this was one hundred ounces in silver per ton, carrying twenty per cent in lead. This company also purchased two thousand two hundred and fifty tons of bullion, averaging three hundred ounces in silver to the ton. Their works now contain about one thousand tons of ore, which will be handled before further purchases are made. The highest grade of ore handled during the month was in excess of thirteen hundred ounces, and the lowest, thirty ounces.

Harrison Reduction Works.—The two furnaces owned by these works ran successfully the entire month of September, smelting 1,989,600 pounds of ore into 309,903 pounds of bullion, averaging 581 ounces in silver, and 1 6-10 ounces in gold per ton. The value of ore on hand at the end of the month was $183,210, and the value of bullion shipped during the same time was $115,000

Grant's Smelting Works.—These works had in operation four furnaces during the entire month of September, and two more were blown in on the 29th of the month. The bullion product during the month was four hundred tons of an average value of four hundred and nine ounces in silver. This amounts to one hundred and sixty-three thousand six hundred ounces, or eleven thousand two hundred pounds weight in silver. Computing the price of silver at one dollar and twelve cents, and deducting its weight from the lead in the bullion, and including the value of these three hundred and ninety-four tons of lead bullion at seventy-five dollars per ton, the commercial value of the month's product is two hundred and twelve thousand seven hundred and eighty-two dollars.

This is very high average for bullion in bulk, as it contains a trifle over 28 pounds of silver to each ton of bullion.

This company paid out for ores during the month $221,000 for Little Pittsburg ore, and $10,000 for ores from the samplers. Seven furnaces will be in blast during this week, and the present output of 15 tons of bullion per day will be further increased, and the product for October will be nearly double that of September.

Grant has, piled up about about his smelter, some two hundred and fifty thousand bushels of charcoal, now worth fifteen cents per bushel, and has also coke and wood, the total amount of which fuel is nearly fifty thousand dollars.

The consumption of coke and charcoal is a great item of expense to our smelting establishments. The amount of fuel to each charge varies at the different works, some using more coke and less charcoal and *vice versa*, and therefore it is difficult to estimate the total monthly consumption; but it is not far from an average of three hundred and seventy-five bushels of charcoal per day to the stack. Estimating only eighteen stacks in operation in the camp, we find that six thousand seven hundred and fifty bushels are required per day, at a cost monthly of about thirty thousand dollars.

Thirty-eight tons of coke per month to the stack at thirty-seven dollars per ton amounts to a little over twenty-five thousand dollars, and this, with charcoal and wood, figures up to about sixty thousand dollars per month for the fuel used by our smelters.

The dumps of ore about the Little Pittsburg Consolidated, the Little Chief, and other mines on Fryer Hill are bewildering evidences to the stranger of the prolific yield of the carbonate mines.

Miners are paid three dollars per day, and common labor two dollars and a half. This does not include board and lodging.

The San Juan Reducing Company's works at Gladstone have been running for the past two weeks. They lately purchased fifty-five tons of Mount Sneffels ore, which, with what they have on hand, will make over 300 tons of high-grade ore to be treated this fall.

Smelting works will be erected at Animas City, Colo.

On September 24th, 18,000 pounds of Virginius ore were shipped to Pueblo. The ore assayed 325 ounces per ton.

The Dakota, via Isthmus, carried, *en route* for Hamburg, Germany, recently from San Francisco, silver bullion valued at $34,421; copper ore, 1286 ctls.

The Clifton mines, Arizona, sent a large consignment of copper to Baltimore recently.

About 24 tons of flue dust are daily shipped from the Eureka Consolidated furnaces to Salt Lake for reduction.

The Gold Flood.—We append herewith a statement, showing the receipts of gold, including some silver at the port of New York, in addition to that announced in our issue of October 4th:

Date.	Steamer.	Description.	Amount.
Oct. 3d	Prince Le Boo:	United States silver	$190
" 3d	Morro Castle:	United States silver	806
		Foreign gold	5,150
		Foreign silver	194
" 3d	City of Rio de Janeiro:	United States gold	835
" 3d	Maine:	United States gold	484,507
		Gold bars	238,000
		Foreign gold	489,442
" 3d	Adriatic:	Foreign gold	164,482
" 3d	General Werder:	Foreign gold	189,793
" 6th	City of Berlin:	United States gold	242,254
		Foreign gold	55,000
		Gold bars	285,655
" 6th	Clyde:	United States gold	1,600
		United States silver	1,900
		Gold bars	2,380
" 6th	City of Merida:	United States gold	10,280
		United States silver	24,314
		Foreign gold	43,022
		Foreign silver	65,203
" 6th	Gallia:	Gold	425,000
" 7th	Lessing:	Gold	1,204,600
" 8th	Canada:	Gold	1,067,200
Total for the week			5,001,807
Announced in our last			$39,725,903
Grand total since January 1st, 1879			$44,725,710

The £150,000 of bullion remaining on the market from the Australian consignment of £200,000, mentioned on Saturday, the 27th ult., together with £25,000 additional, were purchased in London on the 3d inst., for shipment to New York.

LONDON, Oct. 6.—Sixty-five thousand pounds of the bullion withdrawn from the Bank of England to-day is for

shipment to New York. The Manchester *Guardian*, in its financial article this morning, says: "The steamer Labrador, which sailed from Havre on Saturday, October 4th, took out about 15,000,000 francs in gold for New York."

LONDON, Oct. 10.—The *Financier* this morning says: "A small parcel of Napoleons came from Paris on Thursday and was purchased for shipment to New York, for which quarter some eagles will be taken from the Bank of England to-day."

The *Shipping and Commercial List* says: "The ease with which Europe has parted with thirty-five to forty million dollars in gold to be sent to this country during the past two months, is a fitting commentary upon the idea that there is not gold enough in the world to do the business of the world. The European banks have been largely overstocked, and their managers are entirely willing to part with the surplus. As soon as the excess has been sufficiently reduced, the rate of discount will stiffen naturally, and the equilibrium will be established. Meanwhile the rapid increase of money here has given such an impetus to trade and speculation as was not dreamed of a year ago, and the advance in prices has been sufficient to give it employment at full rates."

Standard Dollar Statistics.—WASHINGTON, Oct. 9, 1879.—The Treasurer reports that the total amount of standard silver dollars coined is $42,757,750. The amount on hand in the Treasury offices is $31,703,683. The amount outstanding in circulation is $11,054,070. In coining this sum, nearly 1100 tons of silver bullion and 120 tons of copper have been consumed. The profit accruing to the government on the coinage of this amount is between $6,000,000 and $7,000,000.

Forcing Coin into Circulation.—Hereafter 20 per cent of salaries and other current government obligations are to be paid in coin in equal parts of gold and silver. Holders of obligations will be required to take this much coin, with the option of taking all in either gold or silver or certificates.

Shipment of Fractional Silver.—The Treasury Department has arranged with express companies to transport all shipments of fractional silver to parties ordering it at government contract rates. Heretofore it has been customary for consignees to pay the transportation at private rates. Under the new arrangement, the cost of transportation will be deducted at the Treasurer's office, upon the basis of a charge of three tenths of 1 per cent per mile for every $500 shipped, provided that the express company shall receive not less than 50 cents on every consignment it may handle.

The Treasury Department purchased for the Philadelphia and San Francisco Mints, on the 8th inst., 330,000 ounces of silver, making the total purchases so far this month, 620,000 ounces. It is not likely that much of that purchased to-day was for the San Francisco Mint, as silver still commands from ½ to ¾ of a cent per ounce more in that city than in London.

Exports of Gold and Silver from New York:

Week ending October 4th	$135,910
Corresponding week last year	59,974
Since January 1st, this year	12,476,682
Corresponding period last year	10,258,521

Gold Interest Paid out by the Treasury:

Week ending October 4th	$2,874,344
Corresponding week last year	743,729
Since January 1st, this year	48,607,133
Corresponding period last year	54,898,079

The Russian Coinage for 1880.—It is stated that during the year 1880 the coinage of 20,400,000 roubles worth of gold, and 7,312,000 roubles worth of silver will be authorized in Russia.

LONDON, Oct. 3.—It is reported that Peru has suspended payments from the treasury, and prohibited the exportation of silver.

METALS.

NEW YORK, Friday Evening, Oct. 10, 1879.

The week under review has witnessed the greatest excitement in the metal trade. There has been a very large business, and prices have, without exception, advanced. The movement in metals has not been confined to this country, for the cable dispatches indicate nearly as wild a condition of affairs abroad, there being an advance in nearly all articles there.

Copper.—The sales reported us amount to but about 500,000 lbs., yet the price has advanced from 20½c. at the date of our last to 21½c. to-day. It is reported that the price of Chili bars in London has advanced to £65.

Tin.—This article has been very active, and has made very rapid strides upward. At the date of our last, the London price of Straits was £76, since when it has reacted, and £82 10s. is now quoted. It is said that a "bear" movement has been made, to give the speculators a chance at the coming Billiton sale. To-day the Penang quotation is $30, and Singapore $28.50@$29. The transactions in this market have amounted to, in sales and re-sales, fully 1000 tons of Straits, selling up to 22½c. which is bid at the close. About 100 tons of Refined English selling up to 21½c., and 50 to 75 tons of L. & F. selling up to 20¾c., the higher prices being maintained at the close with considerable excitement ruling in the market.

Tin Plates.—There has been the wildest kind of excitement in these, the sales being very large. The English market appears to be even more excited than this one. Makers are refusing orders, and coke tins are cabled to-day at 22s. 3d. Prices are very strong in this market, and there is a strong upward tendency. We quote as follows: ¼ X, Melyn grade, at $7.75@$7.87½; Allaway, $7.50@$7.62½; Dean and S. T. P., $7, and large, $14.50; ordinary Allaway, $6.87½, and large, $14; coke tins, B. V. grade, $6.87½@$7, roofing, $6.25@$6.37½.

Spelter and Zinc.—These have been quiet, although strong. Spelter is quoted at 6⅛@6¼c., and sheet zinc at 7½@7⅝c.

Lead.—This has been very active, under a very strong consumptive demand, the sales reported aggregating 3000 tons at 4½@5c., with, it is said, 5½c. asked at the close; but, more properly, no price named by the actual holders, who are limited, it being stated that the supply here does not amount to over 1000 tons. London advices announce that the price there has risen to £16 10s., equal to 5⅝@5⅞c., laid down here. The following is a list of the Utah furnaces in and out of blast:

	In blast.	Out of blast.
Flagstaff	..	4
Mingo	1	3
Davenport	..	2
Telegraph	4	1
Germania	2	1
Morgan	..	1
Stockton	1	3
Frisco	3	1
Pascoe	1	1
	12	17

The advanced price of lead will tend to put some of these in blast, but the increased production will only keep track with the growing and anticipated consumption.

The receipts of lead at St. Louis, by the St. Louis & San Francisco RR., for the week ending September 31st, 1879, were 380 tons, making a total of 5820 tons since January 1st.

Antimony.—This article shows quite an advance. The sales have aggregated about 100 casks, at 18½@19c. for Hallett's and 20c. for Cookson's.

Quicksilver.—The San Francisco *Commercial Herald* of October 2d says: "Seemingly there is no demand ever since the news reached us of the break at Hong Kong. Buyers seem to be scarce, and the price, 36c., is entirely nominal. The City of New York, for Sydney, carried 100 flasks, valued at $3060. Receipts for the week, 1465 flasks. Our monthly receipts are as follows:

Month.	1878—Flasks.	1879—Flasks.
January	4,290	5,631
February	2,686	5,147
March	2,762	5,127
April	5,375	5,400
May	5,738	5,888
June	5,956	6,437
July	5,116	6,222
August	6,239	6,352
September	5,589	6,826
Totals	43,751	53,030

Our exports by sea for September, 1879, are as follows:

To	1879—Flasks.	1879—Value.
China	1,836	$8,429
Mexico	914	27,802
Australia	100	3,060
Peru	200	6,120
Chili	200	6,120
Totals	3,250	$101,531
Previous since January 1st	41,749	1,197,118
Totals since January 1st	44,999	$1,298,649
Same period, 1878	23,198	771,121
Increase this year	21,800	$527,528

Salt Lake Ore and Metal Market.

The *Inter-Ocean's* correspondent, under date of September 29th, says:

"The shipments of ore and bullion for the week ending September 27th were as follows: One car Conklin lead ore to Omaha, four cars Morgan bullion to Omaha, two cars Pascoes bullion to Omaha, two cars Germania bullion to Omaha, one car Chicago bullion to Omaha, three cars H. M. & M. Company's bullion to Omaha, two cars Mingo bullion to Pittsburg, two cars Germania bullion to Pittsburg, four cars Telegraph bullion to Pittsburg, one car Chicago bullion to Pittsburg, and seven cars Horn-Silver bullion to Chicago, making a total of twenty nine cars, containing 612,672 pounds, of which 590,672 pounds are bullion, and 22,000 pounds lead ore. No contracts for bullion for October delivery have yet been made. I have spent a part of the past week in Bingham Cañon, in examining the gold mines of that district. There are immense bodies of low-grade gold ores that can be cheaply worked, and no doubt be made profitable. One great drawback, however, to this is a limited supply of water. This can be obviated by building mills on the banks of the Jordan and shipping their ores down by railroad. Though the Bingham Cañon Railroad is narrow gauge, the capacity is almost unlimited. Its grade, though not very steep, is sufficient to allow the loaded cars to reach the Indian River without power, and the only expense is the taking the cars up the cañon and the wear and tear of the cars and road. When this plan is adopted and the many mines that are located on this gold-belt have 100-stamp mills that can be run and managed cheaply, it seems to me there is considerable money to be made. This belt, I think, extends from the May Flower mine on the south to Gap Gulch on the north, making a distance of at least three miles in length. I am of the opinion that very little is known as to the width, as there are no indications on the surface that can guide you in forming an estimate. In depth, they will no doubt find pyrites—which have not as yet been worked in this territory, though Professor Hill in Colorado has done so successfully—but it must be many years before the top ground is or can be exhausted. From Parley's Park and the Ontario mine every thing is exceedingly prosperous. In the Antimonial silver mine, the developments are flattering."

IRON MARKET REVIEW.

NEW YORK, Friday Evening, Oct. 10, 1879.

American Pig.—The business of the week h a been comparatively small, and the inquiries have been reduced. The actual market rates have not weakened, yet the fancy quotations are not so numerous. It is generally thought that there will be some quietness until at least the latter part of December, if not early in January; and in the mean time there may be a weakening in prices. Although there are a good many "bears" for short delivery, yet they are all "bulls" on next year's business, and, we think, not without good reason. The demand in 1880 will be enormous, and we shall be quite unable to supply it. The imports of foreign iron will figure in the hundreds of thousands of tons. Few can imagine what the prospective demands of our railroads will be; but they will certainly be away beyond our ability to supply, and iron and steel rails must be imported in large quantities. Prices will advance in England, and, unless the duty on steel rails is modified, our railroads will have to pay considerably higher prices than are now being asked.

We can not quote above the following, although higher prices are mentioned in several quarters: No. 1 Foundry, $29@30; No. 2 Foundry, $27@28; and Forge, $27@28.

A dispatch received to-day says:

"BIRMINGHAM, Oct. 10.—At the quarterly meeting, in this place, of the iron trade, there was unusual animation. Prices were strong all around, and in several instances an advance was obtained. American buyers particularly mustered in great strength. Extensive purchases of tin plates were made by the Americans at 4@6 shillings per box advance on the recent minimum rates. The Americans also made large contracts for raw and old iron, to be shipped to America for conversion into finished iron."

Scotch Pig.—Sales of about 800 tons are reported. The arrivals were all sold previously. The Glasgow market has been quite excited through the demand from this country and home speculation. There has been, however, considerable exaggeration as to the extent of the orders that have been placed. We quote, to arrive, as follows: Coltness, $29@30; Eglinton, $26@$27; Glengarnock, $28; and Gartsherrie, $28.50.

According to the circular of Messrs. John E. Swan & Brothers, of Glasgow, bearing date of September 26th, 1879, the number of furnaces in blast was 68 against 89 last week, and 95 a year previous. The quantity of iron in Connal & Co.'s stores was 311,727 tons, showing an increase of 4360 tons during the week. The shipments show an increase of 7694 tons since Christmas, as compared with shipments to same date in 1878. The imports of Middlesbrough pig-iron for the same periods showed a falling-off of 37,510 tons since January 1st, 1879.

The following are the quotations of the leading brands of No. 1 Scotch pig-iron: Gartsherrie, 62s.; Coltness, 62s. 6d.; Langloan, 60s.; Summerlee, 61s.; Carnbroe, 63s.; Glengarnock, 63s. 6d.; and Eglinton, 59s.; Middlesbrough pig-iron was quoted as follows, f. o. b., Tees: No. 1 Foundry, 43s. 6d.; No. 2, 41s. 6d.; No. 3, 40s.; No. 4, 39s. 6.; and No. 4 Forge, 39s.

Rails.—Sales of from 75,000 to 100,000 tons of steel rails, for next year's delivery, are reported for the week. In iron rails, we learn of no transactions. We quote steel rails at $50@$55 at the works. American iron rails here are held at $49@$50, while English can be laid down at about $43.

Messrs. John H. Austin & Co., of London, under date of September 24th, say: "Iron and steel rails continue firm at our quotations. Old iron rails are in great demand at from £4@£4 2s. per ton, c. i. f. to United States ports. We quote iron rails at £4 10s., Tyne, Tees, and Wales, and steel rails at £4 15s.@£5 5s., Tyne, Tees, and Wales, and £4 17s. 6d.@£5 5s., Liverpool."

Old Rails.—The sales will aggregate at least 10,000 tons, and are firm at $32.

Wrought Scrap.—There is but very little doing in this. It can be imported at $32 per ton, while here $33@$40 is asked.

We publish the following letters from our regular correspondents:

"LOUISVILLE, KY., Oct. 7.

"The market is very strong, and has advanced from $5 to $8 per ton during the last week. Nearly all sales are for cash, and we revise quotations on this basis.

"GEO. H. HULL & Co."

"RICHMOND, VA., Oct. 6.

"About 200 tons of pig-iron were sold the past week.

Quotations remain firm, although the market is quiet. Most of our foundries have supplied themselves for ninety days to come.

"Asa Snyder."

"Baltimore, Md., Oct. 6.

"The iron market continues active, and prices firm at about the following rates:

Balt. Char.	$38.00@$40.00	M. & White	$25.00@$26.00
Va. "	39.00@ 41.00	C'lC.B.Blooms	60.00@ 65.00
Anth.No.1	30.00@ 31.00	" " Billetts	65.00@ 68.00
" " 2	29.00@ 30.00	Refi'd Blooms	50.00@ 55.00
" " 3	28.00@ 29.00		

"R. C. Hoffman & Co."

"St. Louis, Oct. 6.

"Retain quotations of last week. Condition of market about the same. Metal still in very short supply.

"Card & Hoffer."

Philadelphia, Oct. 9, 1879.

[Specially reported by Justice Cox, Jr., & Co., Iron Merchants, 333 Walnut street, Philadelphia.]

Pig-Iron.—There is little new to report in the iron market. Foreign iron is arriving; but, contrary to all expectation, it does not disturb the market in the least, as our brothers over the sea want just as much advance as we get on this side; hence, every dollar we here advance has brought a proportionate advance on the other side, and our market is just as steady to-day as any time since the advance set in. No. 1 and Gray Forge continue in good demand, and all lots are quickly taken at full quoted prices. We quote No. 1, $30@$32; No. 2, $28@$30; Gray Forge, $27@$28; Scotch iron, as to brand, $27@$29—all Philadelphia.

Manufactured Iron.—The demand for all classes of manufactured iron continues, and all mills are running to their fullest capacity and hardly supply the demand. The order for Plates is especially large. We quote Bars, 3@3 2-10c.; Plates, 4@7½c.; Skelp, 3¼@4c., all Philadelphia.

Old Rails.—The demand for old rails is not quite as brisk as reported some weeks back. The foreign rails arriving have supplied the past demand, and some lots are offered without takers, at last week's quotations. We quote, $30.50@$32, Philadelphia.

Scrap.—Wrought is scarce at $30@$33. Cast is $16@$22, as to quality.

Rails.—We quote steel at $48@52; iron, $42@$46.

San Francisco, Cal., Oct. 2, 1879.

Last week, we noted sales of 2500 tons of Scotch and English pig-iron at or about $25 per ton. Our market for pig-iron has been depressed under heavy stocks and a very restricted demand for two years or more, and it is a fact, that during September this very iron was freely hawked upon the market at $23.50, without finding buyers, and before a week elapsed a foreign order came ordering its purchase, when an advance of some $2 per ton was realized. It is now said that Scotch pig-iron can not be laid down here under $30@$32 per ton. Be it so; but as our spot stocks are large, and the every-day consumption light, we do not see much profit even in this venture.—*Commercial Herald.*

THE BRITISH IRON MARKET.

The following, quoted from Messrs. Sanders Brothers' circular, bearing date London, September 22d, indicates that a steady improvement is taking place; and, although the United States probably put the wheel in motion, yet assistance is coming from all sides to keep it going. The outlook is certainly very encouraging.

"The market for Scotch pig-iron has steadily improved during the past month, a large business being done both in Warrants and shipping brands, and when, a week ago, the iron-masters decided to blow out one third of the furnaces in consequence of disputes with the workmen, there was increased animation, and prices for Warrants advanced rapidly to 48s. per ton; the demand has not since slackened at all, and we close with a firm market for Warrants at 51s. 6d. Makers' iron has improved in sympathy with Warrants, as will be seen by the above figures, which are fully 7s. to 8s. per ton above our last month's quotations. The average weekly shipments are 11,492 tons, as compared with 8613 tons in the corresponding period of last year. For Bessemer pig-iron, we have to report quite an active demand from the States lately, and the amount of business done has been very considerable, it being next to impossible now to buy in any quantity at all for early delivery, as makers, as a rule, have their order-books full to the end of the year, and are asking an advance of about 7s. per ton from the bottom for next year's delivery; to-day's price being 55s., f. o. b., for equal quantities Nos. 1, 2, and 3. Cleveland pigs have also shared in the general improvement, and there is an increasing inquiry from the States for this class of iron, which gives considerable firmness to the market. The demand so far has been principally for No. 4 Forge and No. 5, or Mottled Pig, for which to-day's prices are 37s. and 36s., f. o. b., shipping port. For Cleveland Foundry Pig, we quote No. 1, 40s. 6d., and No. 3, 37s. 6d.

"The business in steel rails for Russia, Canada, the Colonies, and India has been on a very large scale. Makers, as a rule, are full of work to the end of October, and to the end of the present year, and are naming advanced prices for further commitments. A new feature, after a cessation of many years, has been a large inquiry for the States, which, however, thus far, has only resulted in a few small orders for quick shipment.

"Iron rails have been in fair demand, though rather less for the States than a month ago, makers generally being unable to supply the quick deliveries that seem an essential part of any contract made for the States. Prices, however, are firm, with rather an upward tendency, owing to the increase in all kinds of raw materials.

"Old iron rails have advanced fully 10s. a ton since our last, and business has been done from 70s. to 77s. 6d. per ton c. f. i., Eastern United States ports. The demand is still large, but the supply is limited, and business, therefore, extremely difficult.

"A large business has been done in spiegeleisen up to £4 10s., f. o. b., for 20 per cent English. All makers appear to be full to the end of the year, and many as far as April next, declining to quote further at any price.

"There has been a quiet demand for ferro-manganese in comparison with other kinds of iron and steel, and it has not yet participated to a like extent in the general advance

"A marked change has taken place in all branches of manufactured iron since our last, and the long spell of depression, through which this trade, over the whole country has passed, would appear at length to be broken; indications from almost every quarter pointing to a revival causing the market to be materially firmer, although, speaking generally, prices for the ordinary kinds of merchant iron have not as yet advanced to any appreciable extent. An early movement, however, is looked for, and very considerable business has been done during the past month, partly on speculative account, in view of a rise, which is almost sure to take place should the present activity continue. In some cases, makers have booked very largely, and there is no scarcity of buyers at current rates; but, as a rule, makers display an indisposition to book themselves far ahead, thinking that by waiting they will do better, and there would seem to be every prospect of their anticipations being realized. An encouraging feature is the revival of demand for manufactured iron from the States, after a cessation extending back over several years; and although the actual transactions put through up to the present time have not been on a scale of any magnitude, there are large inquiries in the market for next year's delivery, which impart a hopeful aspect to the future. For marked iron, quotations remain unchanged at basis of £7 10s. for bars; but the commoner brands are not now obtainable anywhere at the extremely low figures ruling a short time ago, some makers declining to sell under £7 at the works. New life has been infused into the sheet trade by the sudden rise in spelter, referred to in our last, which has induced quite a rush of orders for galvanized iron, the price of which has advanced fully 25s. per ton from the bottom, and is expected to go still higher."

STATISTICS OF COAL PRODUCTION.

This is the only Report published that gives full and accurate returns of the production of our Anthracite mines.

Comparative statement for the week ending Oct. 4th, and years from January 1st:

Tons of 2240 lbs.	1879. Week.	1879. Year.	1878. Week.	1878. Year.
Wyoming Region.				
D. & H. Canal Co.	70,068	2,518,300	49,073	1,537,951
D. L. & W. RR. Co.	81,727	2,794,245	46,504	1,530,736
Penn. Coal Co.	*	1,031,004	31,909	640,476
L. V. RR. Co.	22,374	702,033	16,112	588,315
C. & N. Y. RR. Co.	532	25,574	944	23,500
C. RR. of N. J.	†20,103	1,424,886	22,124	692,016
Penn. Canal Co.	9,989	333,936	12,558	257,753
	204,793	8,889,978	179,224	5,270,807
Lehigh Region.				
L. V. RR. Co.	77,316	2,422,964	48,503	1,754,167
C. RR. of N. J.	†23,219	1,575,443	17,565	948,026
D. H. & W. B. RR.		19,404		23,580
	100,535	4,017,811	66,068	2,725,773
Schuylkill Region.				
P. & R. RR. Co	164,200	5,609,281	163,284	3,579,433
Shamokin & Lykens Val.	20,330	682,031	14,992	546,895
	184,530	6,291,312	178,276	4,126,328
Sullivan Region.				
Sul. & Erie RR. Co.	1,029	36,643	932	24,635
Total	490,887	19,235,744	424,500	12,147,543
Increase	66,387	7,088,201		
Decrease				

Total same time in	1874	14,517,865 tons.
" " "	1875	13,867,686 "
" " "	1876	12,365,653 "
" " "	1877	14,275,663 "
" " "	1878	12,147,543 "
" " "	1879.	19,235,744 "

The above table does not include the amount of coal consumed and sold at the mines, which is about six per cent of the whole production.

* This report was not received this week.

† For the three days ending Oct. 3d.

Belvidere Delaware Railroad Report for week ending Oct. 3d:

	Week.	Year. 1879.	Year 1878.
Coal for shipment at Coal Port (Trenton)	1,055	14,418	8,029
Coal for shipment at South Amboy	6,259	336,228	334,499
Coal for distribution	7,164	239,549	130,841
Coal for Company's use	1,974	69,919	61,506

The decrease in shipments of Cumberland Coal over the Cumberland Branch, and Cumberland and Pennsylvania railroads, amounts to 83,782 tons, as compared with the corresponding period in 1878.

Coals Cleared on the Canals of the State of New York from Sept. 23d to Sept. 30th, inclusive:

Tons of 2000 lbs.	1879.	1878.
Anthracite	21,727	18,830
Bituminous	7,529	8,480
Totals	29,256	27,310

Perth Amboy Business:

	Tons.
Received for the week	34,892
Shipped for the week	33,476
On hand Oct. 4th	137,636

Receipts and shipments of coal at Chicago, Ill., for the week ending Oct. 4th, and year from January 1st:

	Week. Tons.	Year. Tons.
Receipts	53,685	1,693,780
Shipments	12,240	334,738

The Production of Coke for the week ending Sept. 21st:

Tons of 2000 lbs.	Week	Year.
Penn. R R. (Allegheny Region)	1,166	36,445
West Penn RR.	1,255	67,442
Southwest Penn. RR.	2,311	688,254
Penn. & Westmoreland Region, Pa. RR.	2,282	66,234
Pittsburg, Penn. RR.	4,723	124,231
Total	31,737	982,606

The Production of Bituminous Coal for the week ending Oct. 3d was as follows:

Tons of 2000 lbs., unless otherwise designated.

	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Tons of 2240 lb	4,260	1,128,358
Barclay Region, Pa.		
Barclay RR., tons of 2,240 lbs	6,207	246,749
Broad Top Region, Pa.		
Huntingdon & Broad Top RR.	2,850	103,898
*East Broad Top	1,471	46,780
Clearfield Region, Pa.		
*Snow Shoe	1,112	47,434
*Tyrone and Clearfield	35,356	1,085,552
Alleghany Region, Pa.		
*Pennsylvania RR.	4,876	137,135
Pittsburg Region, Pa.		
*West Penn RR.	4,594	147,968
*Southwest Penn. RR.	655	27,756
*Penn & Westmoreland gas coal, Pa. RR.	11,459	54,021
*Pennsylvania RR.	14,586	360,253

*For the week ending Sept. 21st.

THE COAL TRADE REVIEW.

New York, Friday Evening, Oct. 10, 1879.

Anthracite.

There has been only a moderate business the past week, yet prices are perhaps 15c. a ton higher. Some are asking a greater advance, and others are taking less. The Pennsylvania Coal Company finds its coal moving so easily that it will try the experiment of quotations, good for ten days, at an advance of 20c. per ton. The spirit of speculation is so strong that it will be difficult to keep down the price much longer of even an article so largely over-abundant as anthracite coal. Besides, the greatly increased actual requirements of dealers and manufacturers are doing much to give strength to prices, the combination effort having assisted but very little.

Wall street has been full of combination rumors for the past week; but, in the coal trade, it is said that the movement will be abandoned. It is now said that Jay Gould, having failed to secure the Erie road to complete his transcontinental line of railroads, will use the Delaware, Lackawanna & Western and its leased roads, and that this stock will go to $100—and the other coal stocks advance in sympathy. We hope that some such outside argument will hereafter be left to control the movements in the prices of the coal stocks on Wall street, and then the coal trade may have some chance of recovering.

The weather is at present unfavorable to a large consumption of coal for domestic purposes; but there is, nevertheless, a large amount of coal being taken from the dealers by families for anticipated wants of winter. Should the season be a moderately severe one, the consumption will be very large, and as prosperity rules generally, there will not be that economy of consumption that has existed in households for several years past. The demands from all classes of manufacturers will be greater this winter than during any winter heretofore, while the indications are favorable to a larger consumption next spring. We therefore have to take a more cheerful view of the prospects of the coal trade, although realizing that a very large demand is requisite to cure the evils now existing.

The Philadelphia & Reading Coal and Iron Company furnishes the following statement of its outstanding contracts:

Tons.	Size.	Quantity and Price, Philadelphia or New York. Quantity	Price.	New York or Port. R.	Equiv'nt price f.o.b., N. Y.
8,200	Lump and Steamer.	3,900	$3.25	Hudson R.	$3.08
		4,300	2.50	Port. R.	2.85
36,150	Broken	100	2.00	Port. R.	2.35
		7,000	2.25	Port. R.	2.60
		2,200	2.40	New York.	2.40
		2,020	2.30	New York.	2.30
		24,800	2.50	Port. R.	2.85
700	Egg	500	2.10	Port. R.	2.45
		150	2.00	Port. R.	2.35
		50	2.20	Port. R.	2.55
2,050	Stove	1,000	2.25	Port. R.	2.60
		350	2.25	Port. R.	2.60
		700	2.30	Port. R.	2.65
4,700	Nut	4,700	2.00	Port. R.	2.35
23,450	Pea	7,150	1.50	New York.	1.50
		16,300	1.35	Port. R.	1.70
75,220					

8000 tons different sizes at September prices.

10,000 tons different sizes at September prices, plus half advance.

Average of each size, f. o. b., New York.—Lump and Steamer, $2.96; Broken, $2.74 2-10; Egg, $2.43 5-10; Stove, $2.61 7-10; Nut, $2.35; Pea, $1.63 9-10.

Price at Scranton, sale September 24th.—Broken, 97½$1.; Egg, $2.10½; Stove, $2.35¾; Nut, $2.19¾.

The production of anthracite coal last week was 490,887 tons, as against 488,458 tons the previous week and 424,500 tons the corresponding week of 1878. The total production from January 1st to October 4th was 19,235,744 tons as against 12,147,543 tons for the like period of last year, showing an increase this year of 7,088,201 tons.

Our Philadelphia correspondent, under date of October 9th, says:

"The local demand for coal continues active. New orders at new prices at tidewater, except for special coals, are very scarce.

"Shipment by canal and work at many of the collieries are interfered with by the drought, and rain is anxiously expected.

"Freights continue firm at $1.30 to $1.40 to Boston, and vessels scarce. The large vessels running to Georgetown, Alexandria, and Baltimore for Cumberland coal have prevented rates from going higher, and quite an advance may be looked for here as soon as the Cumberland mines are in operation again.

"The individuals who believe that an agreement will be made by the companies to regulate the production are becoming scarcer every day."

Bituminous.

The labor question attracts the greatest attention in this department at the present time. The New Central Coal Co., in the Cumberland District, which has some large contracts to deliver coal, has been compelled to grant the demands of the miners for an advance of 10c. per ton. It is feared that another company will follow this example; but otherwise there appears to be a determination among the producers to hold out against the miners. The view taken by the companies is that, if the miners' wages are advanced, demands will be made by and will have to be granted to laborers, drivers, boatmen, and in fact, in all departments, so that the cost of putting coal at tide-water would be advanced 20c. per ton. What the prospects of the bituminous trade are for next year it is hard to determine, but the present condition does not warrant this increased cost. The miners are simply benefiting the Clearfield region, where prices have advanced considerably since the strike began. The producers of the Clearfield District say that through the Cumberland strike they have secured a great pressure of orders.

Strikes are being inaugurated in nearly all the bituminous districts; and in some the miners have been successful, and in others the indications are that they will be. The Clearfield producers say they anticipate no trouble from their miners; but it is certain that they do not stand in a very safe position, with strikes all around them in the neighboring districts. It would hardly be a wise movement for the anthracite miners to make a movement this year, but we should not be surprised to see them making a move at the proper time in the spring.

The result of the Cumberland strike has been to enable the Clearfield region to show an increase in shipments from January 1st to September 30th, as compared with the like period of 1878, of 222,726 tons, while the Cumberland region, which, previous to the strike, showed a liberal gain, now shows a loss of 121,426 tons. Should the strike continue much longer, the Clearfield region will produce more coal than the Cumberland.

Mr. F. A. Bates, Cleveland, O., under date of October 8th, says:

"As predicted in my last report, the advance of ten cents per ton has been granted to the miners in the Straitsville and Hocking valleys, and a corresponding advance to drivers and outside laborers. The price of mining in these districts is now sixty cents per ton of 2000 lbs. for screened coal. The operators have now fixed the price of coal on the cars at mines at double digging or $1.20 per ton for the rail trade, and to railroads, rolling-mills, etc., $1. The advance, it is to be hoped, will be maintained, and ruinous cutting stopped.

"I inclose an item from the *Herald* of this morning showing the demand of the miners in the Tuscarawas and Masillon districts, which will doubtless be acceded to."

"AKRON, Oct. 7.—A Beacon special from Clinton, this county, states that at a delegate meeting of Tuscarawas Valley miners, held at that place Monday, it was decided to demand an advance of 10 cents a ton for mining, the present price being 60 cents a ton. Akron operators say that owing to the glut in the coal market at Cleveland it is immaterial to them whether their mines are closed up for a time or not.

"The circular of the Delaware & Hudson Canal Company received this morning, advances the price of hard coal 25 cents per ton in car-load lots.

"There is a determination on the part of shippers here to demand higher prices, and on all new business are getting them. Shipments are comparatively light, but a good fall trade is looked for."

Messrs. C. A. Miltenberger & Co., of New Orleans, La., under date of October 1st, say:

"The coal market is in a very unsettled condition, in consequence of the heavy losses by the sinking of coal boats on September 1st, reducing the already small stock on hand. There is a strong desire among some of the holders of Pittsburg coal to make the market a speculative one and force prices to a very high figure; but the retailers are striving to keep prices down in order to fill their contracts, which have been taken at very low figures. The uncertainty of water in the Ohio River this fall has a tendency to buoy up prices, but the development of the Alabama mines and the importation of foreign coals, and anthracite coal by sail from New York and Philadelphia, will prevent prices from reaching such fancy figures as were obtained several years ago.

"Coal on hand in this city October 1st: Pittsburg coal, 53 boats; 28 of these are coal estimated to be raised from 43 boats sunk, now in process of wrecking; 14 barges, and 2 barges of nut coal; St. Bernard coal, 8 boats and 7 barges. Consumption during September: Pittsburg coal, 7 boats and 2 barges; St. Bernard coal, 2 barges. Arrivals during September: Pittsburg coal, 35 boats; this includes the the above 28 boats estimated; St. Bernard coal, 5 boats and 1 barge.

"We give our quotations, some of which are nominal, as the market is just barely opening and the demand springing up, after a dull season of summer."

PITTSBURG COAL.

At wholesale (by boat-load)	60c.	per bbl. of 180 lbs.
To steamboats	65c.	" "
" families	65@75c.	" "
" manufactories	65c.	" "

ST. BERNARD (KY.) COAL.

At wholesale	45@50c.	per bbl. of 180 lbs.
To steamboats	@55c.	" "
" families	55@65c.	" "
" manufactories	@55c.	" "

ANTHRACITE COAL

Per ton of 2000 lbs.

At wholesale	$5.50@$7.00
To families	7.00@ 8.00

SAN FRANCISCO, CAL., Oct. 12, 1879.

COAL.—Imports from January 1st to September 1st:

	Tons.		Tons.
Anthracite	8,646	Cumberland	1,587
Australian	41,537	English	8,104
Coos Bay	30,480	Seattle	88,008
Carbondale	746	Tacoma	845
Carmel Bay	425	Vancouver Island	104,152

We have no spot sales to record, as the bulk of our present supply came to hand under previous contract. Imports for the week include the following: Per Brodick Castle, 2500 tons Sydney; Fresno, from Liverpool, 1400 tons; Alma, from Newcastle, Eng., 1254 tons; bark Kioto, from Sydney, 839 tons Shale; Blue Jacket, from British Columbia, 1820 tons Wellington; Oriente, from Newcastle, Eng., 890 tons; Indiana from Nanaimo, 2352 tons; Great Western, from Seattle, 2350 tons. The California Mt. Diablo supply is constant, selling at $4 for Screenings: $4.50@$5 for Coarse; Seattle, $5.50@$6; British Columbia, $6@$7; Sydney Steam, $6.50; West Hartley, $7.50. The Yosemite, from Seattle, brought 1908 tons, and the Gussie Telfair, from Coos Bay, 365 tons. The ship Warwick, from Dundee, brought 1500 tons Scotch. The Lizzie Williams, from Seattle, brought 1269 tons.—*Commercial Herald.*

New York.

Wholesale Prices of Anthracite Coal Delivery f. o. b. at Tide Water Shipping Ports, per ton of 2240 lbs.

	Lump.	Steamer.	Grate.	Egg.	Stove.	Chestnut.
WYOMING COAL.	$	$	$	$	$	$
Scranton at Hoboken	2 40	2 40	2 40	2 50	2 75	2 50
*Pittston, at Newburg	2 40	2 40	2 40	2 45	2 70	2 55
Kingston at Hoboken	2 35	2 35	2 35	2 50	2 70	2 50
Wilkes-Barre at Pt. Johnson	2 40	2 40	2 40	2 50	2 70	2 50
Plymouth R. A. at P. John			2 40	2 50	2 80	2 60
LEHIGH COAL.						
†Spring Mt. at Elizabethport	3 50	3 00	2 75	2 75	2 75	2 50
Up. L. & Coun. Ridge, Eliz'pt	3 50	3 00	2 75	2 75	2 75	2 50
Honey Brook at Port John	3 35		2 70	2 70	2 70	2 50
Hazleton at Perth Amboy	3 65		2 75	2 75	2 75	2 50
SCHUYLKILL COAL.						
‡*Alongside at N.Y. Harbor.*						
Hard White Ash	3 50	3 50	2 85	2 85	2 90	2 70
Free-Burning White Ash			2 60	2 60	2 90	2 70
Schuylkill Red Ash				3 00	3 15	2 70
Lorberry				3 75	3 75	3 25
Lykens Valley (Brookside)			4 35	4 35	4 35	3 50
At Port Richmond, Philadelphia, for shipment to points beyond capes of the Delaware.						
Hard White Ash	2 75	2 75	2 50	2 50	2 50	2 25
Free-Burning White Ash			2 20	2 30	2 50	2 50
Schuylkill Red Ash				2 50	2 60	2 25
Shamokin				2 75	2 75	2 25
Lorberry			3 00	3 00	3 00	2 50
Lykens Valley (Brookside)			3 50	3 50	3 50	2 75

* Fifty cents per ton additional for delivery in New York.

† These prices are given by Whitney & Kemmerer.

‡ On coal delivered f. o. b., at shipping wharf at Williamsburg, the current rate of harbor freight will be allowed from above prices.

Wholesale Prices of Bituminous Coal.

DOMESTIC GAS COALS.

Per ton of 2240 lbs.	At the Shipping Ports.	Alongside at New York.
Westmoreland and Penn	$4.25	
At Greenwich, Philadelphia		$5.50
At S. Amboy	5.00	5 50
Kanawha at Richmond	4.10	5.40
Murphy Run, West Va., at Baltimore	3.75	5.85
Fairmount, West Va., " "	3 75	5.70
Newburg Orrel, Md. " "	3.75	6.00
Cannelton & Peytona Cannel, West Va.		10.00
" Splint " at Richmond	6.00	7.00
" Gas Coal at Richmond	4.00	5.65

MANUFACTURING AND STEAM COALS.

Cumberland at G'n & Alexandria	2.75@2.90	4.35@4.50
Cumberland, at Baltimore	2.90@3.00	4.35@4.50
Cl'rfi'd "Eureka" and "Franklin,"		
At mines	0.75	
At Baltimore & Phila	3.25	4.50

FOREIGN GAS COALS.

	Sterling.	Am. cur'ncy
Newcastle at Newcastle-on Tyne	7s.6d.	$2 50@ $3.50
Liv. House Orrel, at Liv	25s.	13.00
Ince Hall Cannel "	35s.6d.	18.00
" Gas Cannel "	25s.6d.	10 00@ 10.50
Scotch Gas Cannel, at Glasgow, nominal	25s.	7.50
	Gold.	
Bl'k House, at Cow Bay, N.S.	$1.60	
Caledonia, at Pt. Caledonia	1.50	$4.25
Glace Bay at Glace Bay	1.50	4.00
Lingan, at Lingan Bay	1.50	
Intern'l Mines, at Sydney	1.60	
Pictou, Vale Mines, at Pictou	2.00	4.70

Retail Prices.

Per ton of 2000 lbs.

Anthracite.

	G. & Egg.	Stove.	Chest.
Pittston coal delivered	$3.50	$3.75	$3.50
Lack. coal, delivered below 59th St.	3.50	3.75	3 50

FREIGHTS.

Coastwise Freights.

Per ton of 2240 lbs.

Representing the latest actual charters to Oct. 10th, 1879.

PORTS.	From Philadelphia.	From Baltimore.	From Elizabethport, Port Johnson, South Amboy, Hoboken and Weehawken.
Alexandria	85@1.05		
Annapolis	70		
Apponang	1.20		
Baltimore	60		
Bangor			
Bath, Me			1.10
Beverly			1.10
Boston, Mass	1.25@1.52	1.25	1.10
Braintree			1.10
Bridgeport, Conn.		1.25	
Burlington	20		
Cambridge, Mass.			1.10
Cambridgeport			1.10
Camden			
Charleston	1.15		
Charlestown			
City Point			1.00
Coosaw, S. C.			
Damariscotta			1.15@1.20
E. Boston			
East Cambridge	1.35@1.60		
E. Gr'nwich, R. I.			
Fall River		1.25	80
Georgetown			
Hackensack			
Hartford			
Hingham	1.60*		1.10*
Keyport			
Lambertville			
Lynn	1.45@1.55		
Marblehead	1.50		1.10*
Medford			
Millville			
Milton			
Mystic River			85
New Bedford	1.15		1.25
Newburyport		1.40	60
New Haven	95@85	1.25	55
New London			
Newport	1.25		80
New York	90@85	1.25	35
Norfolk, Va	60		
Norwich			
Norwalk, Conn		1.35	
Pawtucket	1.30¶		85
Plymouth			
Portland	1.10@1.15*		
Portsmouth, Va.			
Portsmouth, N.H.	1.40@1.45	1.40	1.20
Providence	1.20	1.25	
Provincetown			1.10
Quincy Point			1.15
Richmond, Va			
Rockland			1.10
Rockport			
Roxbury			
Saco	1.70		
Sag Harbor			85
Salem, Mass	1.40		1.10
Saugus			1.00
Savannah	1.20		
Somerset			
Staten Island	80*		
Thomaston			
Trenton	18@40		
Troy			
Wareham			
Washington	90@1.05		
Weymouth			
Wilmington, Del.			
Wilmington, N.C.			

* And discharging. † And discharging and towing. ‡ 3c. per bridge extra. § Alongside. ¶ And towing up and down. ¶ And towing.

Lake Freights on Coal and Iron Ore.

Representing the latest actual charters up to Oct. 6th, 1879.

From	To	Rate Per ton.	From	To	Rate Per ton.
Blk. River	Milwaukee	$1.00	Cleveland	Chicago	$1.00
Buffalo	Bay City	50	"	Green Bay	1.00
"	Chicago	75	Erie	Detroit	50
"	Milwaukee	75	"	Duluth	1.00
"	Racine	90	Escanaba	Chicago	1.50
"	Toledo	25	"	Cleveland	*

*$2.12½.

FINANCIAL.

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Buy and sell mining stocks on commission on New York Mining Stock Exchange, and offer superior facilities on San Francisco Exchanges through agency of the Bank of California.

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GOLD AND SILVER BULLION AND COINS
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We will make special arrangements with BANKERS and others dealing in GOLD DUST or in GOLD OR SILVER BARS, and will pay over to their correspondents here, as we may be directed, advances on Bullion when received or when the proceeds are ascertained.
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SULTAN HILL MINING CO.,
MONO COUNTY, CALIFORNIA.
CAPITAL - - - - - - - $10,000,000.
100,000 SHARES. PAR VALUE, $100 EACH.
The properties of this Company lie in the Indian District, Mono County, California, and comprise ten claims, each 600 × 1500, containing large, well-defined, and promising veins of gold and silver bearing quartz. The Sultan, Viceroy, Czar, Madison, New Find, all have a width varying from five to twenty-five feet.
The Company is now offering a limited number of shares —10,000 for subscription of $3 per share—for the purpose of pushing forward its developments, and to put the different properties on an early dividend-paying basis.
Subscriptions to the above stock, or inquiries for circulars, may be forwarded to CHARLES H. WATT,
Rooms 32 and 33, No. 61 Broadway, New York.

"Gold and Silver Mines of America,"
BY R. C. STONE.
An octavo pamphlet of 40 pages. Price 20 cents.
The Scientific Publishing Company,
P. O. Box 4404. 27 Park Place, N. Y. City.

DIVIDENDS.
OFFICE OF THE ONTARIO SILVER MINING COMPANY,
31 Broad Street,
New York, Oct. 4, 1879.
DIVIDEND NO. 48.
The regular monthly dividend of FIFTY CENTS per share has been declared for September, payable at the office of the transfer agents, Wells, Fargo & Co., 65 Broadway, on the 15th inst. Transfer books closed on the 10th inst.
H. B. PARSONS, Assistant Secretary.

Horn - Silver Mining Co.,
OF FRISCO, UTAH.
Office, 44 Wall Street, New York.
Capital, $10,000,000; 400,000 Shares; Par. $25.
DIRECTORS.
Charles G. Francklyn, Pres.; A. Byram.
Frank G. Brown, Vice-Pres.; M. Cullen,
Allen G. Campbell, Treas.; D. Ryan.
William S. Hoyt, Sec.;

OFFICE CHEYENNE GOLD MINING COMPANY,
ROOM 38, NO. 61 BROADWAY, N. Y., July 17, 1879.
ANNOUNCEMENT.—The Company originally set aside 50,000 shares for working capital. The proceeds of these shares have been devoted to purchase of property and development with such highly satisfactory results, that the Directors and Stockholders have united in devoting an additional 50,000 shares for working capital, confident that, in thus devoting one half the entire capital stock to development and equipment, they will be amply repaid in the immediate increase in actual value of each share. With the proceeds of the additional 50,000 shares, the Company will have an equipment second to none in this district, famous for permanent and profitable production, and have already one of the largest and best developed groups of mines in the Hills. A constant and large increase in value of this stock is certain. Messrs. R. C. Stone & Co., of 52 Wall street, are appointed the sole agents for the sale of the working capital stock, and offer the first installment of 10,000 shares, at $1.25 per share, books to close on or before July 31st, 1879. The second installment will be offered at $1.50 per share.

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